Janet M. Macdonald

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A
BACKGROUND
TO
Architecture

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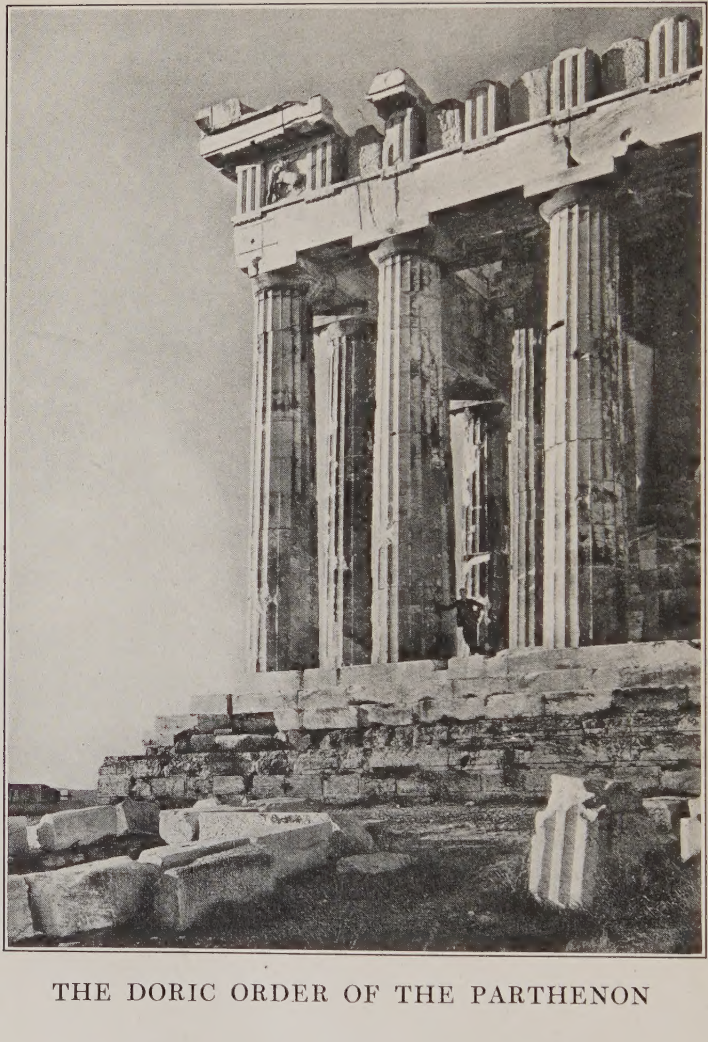

THE DORIC ORDER OF THE PARTHENON

A BACKGROUND TO Architecture

BY

SEWARD HUME RATHBUN, M.A.

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He was born in Detroit, Michigan, December 28, 1872, prepared for college at Phillips Academy, Andover, and was graduated from Yale in the Class of 1894. As an undergraduate he was a leader in many of the college activities of his day, and within a brief period of his graduation was called upon to assume heavy responsibilities in the management and direction of numerous business enterprises in Detroit; where he was also a Trustee of the Young Men's Christian Association and of Grace Hospital. His untimely death, from heart disease, on October 4, 1919, deprived his city of one of its leading citizens and his University of one of its most loyal sons.

To

EMILY RATHBUN

who first taught me to love the beauty
of the past: and to

THE FRIEND AND PUPIL

who desires to understand.

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FOREWORD

THIS analysis is not, properly speaking, a history of architecture. In its comparatively short compass, it is much less than that; in its aim, it is, if not more than the usual technical history, certainly different. The facts have been set forth many times at great and little length and their philosophy discussed in many fascinating works, but before we are ready to understand these in detail, we should gain some broader vision of what architecture is, realize the part it has played in the general development of civilization and discover, if we can, some fundamental laws to guide us in our judgment of the work which surrounds us today, as well as of that which remains from the ages of the past.

To make these things clear in a simple way is the present aim. Some years of teaching the beginnings of architectural knowledge have shown the need of such a preface to the existing histories, which, from the very largeness of the subject, often confuse one who has not the key to the mystery, by their mass of facts and specialized terms. There is no intention here to duplicate what they have already given so adequately, to take arbitrary positions on debated questions, or to dictate to anyone in matters of taste; there is merely an endeavor to show forth the principles on which the recognized architectural achievements have depended for their success, to explain how intimately these achievements have been connected with the other manifestations of the period or race which produced them. It is the big facts and their relationships which will interest us, relationships which, tying architecture to all the other phases of civilization, must be realized before architecture itself can properly be understood. No fact or development that has been significant in the past has ever stood alone, but each has been the result of causes still further in the past, which have made it possible, and of conditions contemporary with it, which have modified its character. So also with the present and the future. What we are doing today is as dependent on the things which lie behind us as on those which make up our daily lives, and what the generations to come will achieve must, in part, be caused by our success or failure now. All the grouped factors of civilization create the background for any one phase of civilization which we may be studying and that is one point of view from which we shall consider architecture, tracing how, in its successive stages of development, it became to some extent the background for its own future and how it was complicated, as a background, by the other forces acting at the time of its production.

To follow all this adequately would be far beyond the present possibilities. To suggest it simply enough so that it may be understood, not in all the complications, but in the big facts which control them, is the real object of this analysis. It is necessary to simplify the details of this background into large masses if we are to see it at all as a single picture.

S. H. R.

Washington, D. C.

CHAPTER I

THE FUNDAMENTALS

ARCHITECTURE is building.

When man in the remote beginnings of civilization began to erect shelters to protect himself from the elements, architecture was born. As his powers increased and his needs and desires became more complicated the structures that he built took more elaborate form, responding to his greater mechanical ability and developing sense of beauty, but always and primarily they remained expressions of his daily life and usage. This is a fact that we must continually bear in mind, although architecture as we shall understand it has become a thing very different from the first attempts of barbarians to meet their purely physical needs. It has evolved structural methods of the greatest daring and complication, but it has gone further, entered the realm of man's activities where it is comparable to all the great creations of his intellect and demands all the artistic powers that he has developed. Always retaining its underlying need of usefulness, it has become one of the fine arts and stands with sculpture, painting, poetry and music among the most noble and enduring productions of mankind. It has been made to express all the ardor of religious feeling and all the beauty and logical precision of philosophical thought. It has been called the mother of all the arts. Sculpture and painting have grown up around it and to some extent originated in the first attempts to decorate it. It is intimately connected with poetry and music in that the time rhythms upon which so much of their beauty depends correspond to the rhythms of space which govern the arrangement of architectural forms.

Critics have elaborated these relationships and developed the idea that the several fine arts have grown one after another in the order of their abstraction, that is, in their power to express ideas with less and less demand of physical aid; architecture first with its underlying utilitarian need from which in its very nature it can never free itself, through sculpture, painting and poetry to music, the most abstract of all in that it makes its appeal by sound alone, creating its impressions with no aid from the visual sense or from the written word. Critics hold too that as one of the fine arts has come to perfection the preceding one has waned. Perhaps we shall find this true of architecture to a certain extent, but from its very physical entanglements, which prevent its abstraction, and from man's constant need of it, it has a power of life that reminds one of the old Greek story of Antæus who, always gaining strength by touching the earth, was unconquerable until Herakles, holding him in the air, could crush him. So with architecture. As long as its fundamental needs are recognized and built upon it remains a vital force in civilization, but when it is lifted above them, taken away from its touch with the earth, it becomes a dying thing, unworthy of its glorious traditions.

These discussions of the relation of architecture to the other arts and to the intellectual productions of man, taken abstractly, form one part of the philosophy of architecture, for the term philosophy implies more than its broad sense of the investigation of the principles on which all knowledge and all being ultimately rest and is used in regard to the principles and laws of any department of knowledge. Such questions will reappear as we trace the development of architecture and will be intimately connected with the other phases of architectural philosophy whose understanding depends upon a knowledge of the historical evolution of the different forms.

When we begin to learn a foreign language, or for that matter when as children we are building up a knowledge of our mother tongue, we must first learn words and their meanings and then their proper combinations or there is no chance of our understanding and communicating with others. It is the same with architecture. We must learn its language and the words of this language are the forms of which buildings are composed, just as, to carry the analogy further, the bricks or stones or pieces of wood from which the forms are made are the letters. Every shape that we use today is the result of a gradual development toward the most artistic fulfillment of some structural need, for in the just combination of beauty and usefulness alone do we find the germs of real architectural greatness and so every form has as definite a meaning as any word in a literary language. The understanding of these meanings is another branch of the philosophy of architecture and it is the development of the better known of these forms that we are setting out to trace, not merely as details, but as acting together in buildings, grouped according to the races which created them and the periods of history in which they were built.

Thus then our view of the history of architecture will be largely a view of the philosophy of architecture, of its big meanings and its relation to the general development of civilization, for it is true, through all architectural growth, that the buildings which each age has left are often the clearest evidence which the historian can find in reconstructing a picture of that age. In the uses for which they were intended he can read the customs and so, much of the thought and life of the people who created them; in the forms of which they are composed he can realize what these people considered beautiful, as well as judge their powers of mechanical achievement and, in that subtle character which pervades the buildings of the different nations and the different ages, tying each group together no matter how different their uses or their general forms, he can sense the basic characters of the national minds which are so difficult to express and yet which are the secrets of their reactions upon the history of the world. Men living and working together under the same conditions of climate and environment and politics, particularly when they are sprung from a common stock, think and feel very much alike and so national civilizations have grown, national religions have developed and national arts, among them national architectures, and thus the architecture of any period bears a definite relation to all the other phases of the civilization of that period. It could not under normal circumstances have been produced at any other time, under different climatic or geographic conditions, or by any other race with dissimilar ideals and characteristics.

The great buildings of one age, however, lived on into the next and perforce had their influence on the new architecture rising around them. The problems already solved served as points of departure for the new problems that demanded consideration and each age, gathering elements from that which had gone before, left an increased legacy to the age that followed, until today all that the past produced is ready to our hand, to help us if we will permit, but fraught with great danger to us if we fail to read its lessons correctly. And before we can study these lessons to the best advantage, we must see the whole subject in its relations to the rest of civilization; we must study not only the great buildings but the people who built them and the other things those people accomplished; we must think of those buildings not alone as relics of dead ages such as we find them now, but as they were when newly erected, in familiar use with all the life of the past throbbing through and around them.

Architecture, then, must never be dissociated from history, for one phase of architecture is history, and if later in any detailed study of form and structure this fact is little emphasized, it must never be forgotten, for, as surely as it is, any work of our own will become ignorant and so lacking in significant value. In this analysis the relationship of the buildings of each age to the other factors of the life which created them will be one of the principal interests. It will be impossible to follow every step in the development. The task would be endless and would, moreover, lose all perspective, but there are great structures, and groups of structures, that have gathered into themselves seemingly the complete expression of their times, culminating achievements after long periods of experiment and gradual growth. These have become the inheritance of the whole world and some of these we shall study and try to understand, not only as masterpieces of architecture, but also, always, as great landmarks in the history of mankind.

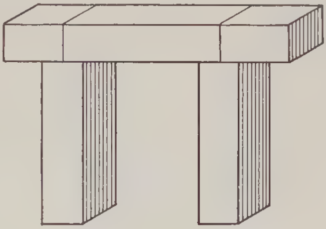
This relationship between architecture and the rest of the civilization of the period in which it was built is one of the phases of its philosophy which we call architectural expression. There are several ways in which architecture should be expressive, but before we go on to define the others, let us analyze in somewhat greater detail this factor of history, dividing it into what we may term direct and indirect historical expression. In the first place we must realize that in all work of lasting value this expression must be unconscious so far as history is concerned, or otherwise it would become self-conscious and restricted. The builders of olden times did not say to themselves, "Let us put into the planning of our work all those forms and types of decoration which shall show to future ages, after our own period of civilization has passed away, just how we lived and what we believed." What they did do, however, was to make the plans of their buildings as convenient as possible for whatever purpose the building was designed; the churches or temples so that the ritual of the religion might best be realized, the fortifications so that they might be as nearly as possible impregnable, the theaters to best accommodate the kind of plays, and the houses or palaces to fit the ideals of family or royal life. And as the walls were reared on these plans, they purposely put into the decoration the fancies and beliefs, the types of design and the colors which to them were beautiful and appropriate. Often they went further than that and in the sculpture and painting as they related it to architecture they wove stories and images to please their gods and constantly to remind the people of their duties and beliefs. They did not say, "We are consciously expressing ourselves and our modes of living," but rather, "We will do this or that because it pleases us or is useful to us, or because these subjects, sculptured in this way which seems to our people beautiful, will direct their thoughts along proper channels and make the use of the building more fitting to them." And so these buildings as we find them now and look through them back to the period in which they were created are real revelations of customs and thoughts which, with the passage of time, have grown dim and been forgotten. The possibility of thus reading the past through the actual uses and purposes of the ancient buildings and their decorations results from what we shall call direct architectural expression.

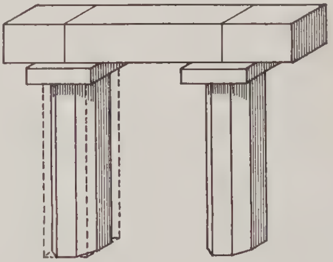
Indirect expression is much harder to define and yet, in some respects, it is even more important in that it is all-pervading. It is the quality which makes Greek work essentially Greek and Egyptian work essentially Egyptian, and these two nations will give us a clear example. Both built largely with stone, both avoided the use of the arch, although both apparently knew it, and employed columnar construction with horizontal lintels, both used color and expressed in the sculptures connected with their buildings their religious beliefs and customs, and yet it would be impossible for the most casually informed person to mistake a Greek building for an Egyptian. Some of the difference, to be sure, lies in the qualities which depend upon direct expression. The actual plans of their temples differ since the rites and ceremonies connected with them differed, the sculptures tell of other beliefs and entirely distinct points of view toward life, but let the Greeks have built a temple on the Egyptian plan, meeting all the requirements which directly expressed the Egyptian, or vice versa, and yet let the Greeks have remained Greek and the Egyptians Egyptian and have worked as was natural to themselves, then the Egyptian structure built by the Greeks would still have been essentially Greek and the Greek structure built by the Egyptians essentially Egyptian.

We must not suppose, however, that the Greek or any other race, separated from all historical background and living in a different climate with a different geology around it, would have produced an architecture exactly like that which it did produce. The forms which eventually were developed to constitute any type of architecture were not inevitable. They were largely the results of inheritance from the past, of climate and of the materials at hand, but the choice of forms from among all those inherited and their final development into a fixed type were absolutely dependent on the nature of the race which was choosing and developing them and the degree of civilization to which it had attained, and this development paralleled that of the other arts of the same race and period, for in the final analysis they all depended on the national or racial sense of fitness and of beauty. And so, to a certain extent, the accomplishment of the Greeks, let us say, was inevitable to just the same extent as the different result achieved by the Egyptians from fairly similar principles was inevitable.

It is this quality resulting in a certain inevitability that we shall distinguish as indirect expression. It pervades every stone in a building. It fixes the general proportions and the form of symmetry, as well as the relations between all the smaller parts and the larger masses. It fixes the curves of the mouldings, the forms of the columns and their spacings, the outlines of the doors and windows. It does not reflect the personality of any one man. It is the combined effort of all the generations of all the builders of the race, each group, each city refining on the efforts of the past to make its temple, its church, more beautiful and more appropriate than those that have gone before. It is all the mechanical knowledge of the race, seen in the working and placing of every stone; all the logic, seen in the disposition and proportion of the parts; it is all the sense of beauty of the race, moulding and constantly refining each form toward that ideal which seems to that race most worthy. And so, aside from all definite characteristics on which we can lay our finger, the great buildings become the epitome of the genius of the race that produced them, for all the soul of the entire race has gone into the making of them. This expression is a spiritual quality helping to raise architecture above utilitarianism and so, as one race or another has, in all its productions, felt beauty more worthily and sought it more diligently, its architecture has become so saturated with its power that its spirit lives immortalized for us in its buildings.

We are now ready to look a little more closely at the forms themselves from which the buildings have been composed, to study, so to speak, somewhat of the vocabulary and grammar of the language of architecture, or at least those principles which underlie that vocabulary and grammar. One of the distinctions interesting to make at the beginning will show us a little of the processes through which these forms have grown to completion. This is another question of expression and, briefly stated, is this: Are the different forms as we find them not only appropriate to the material in which they are wrought, but have they developed always in that same material, or have they been copied from something already worked out in some other material? Let us take the column as an example. In some very early buildings we find simple rectangular blocks of stone set on end and carrying similar blocks laid horizontally, on which the roof slabs rest. This is the most elementary form of a stone column and its appropriate superstructure. Now, the space which could be spanned by a single horizontal block, particularly in the days when mechanical power was slight, was comparatively small and so an interior whose roof was supported by such columns was crowded and the sharp corners of the rectangular uprights were decidedly in the way. The next step, then, would be to cut away these projecting edges, forming octagonal blocks, and this process might be continued until the form approximated that of a perfect cylinder. At the same time, the horizontal blocks retained their rectangular shape and, as the supports became more and more circular, the meeting of the two grew clumsy. To obviate this the top of the columnar piece was left uncut, still a rectangular block, underneath which the rounded part stopped and on which the horizontal pieces could rest with precision. We have here all the germs of a great series of architectural forms, of column, capital and superstructure, logically developed step by step in a single material and containing the possibilities of all the refinements which the genius of





one race or another might imagine. Architectural forms so developed are called primary forms and we might liken an architecture composed altogether of such to a language evolved by a race completely out of touch with other races and building up its speech entirely from propensities innate in itself.

Such developments, however, have been by no means the only ones and in many cases the forms have originated in one material and then been copied and further complicated in another, sometimes so logically that they have become as valuable as primary ones and yet sometimes so retaining the characteristics of their first material that their origin is unmistakable. These are known as secondary forms and here again the column will serve as an illustration. Suppose a race living in a land where stone was scarce, or else a race whose stage of civilization had not yet brought it the power of working stone. Suppose that these people built walls of mud strengthened with reeds and supported their roofs on wooden posts, or even groups of slender poles bound together. Now suppose that these people migrated to a different country where stone was plentiful, or else that their mechanical powers so increased with their desire for more permanent structures that stone became their building material and, instead of abandoning those forms which had become traditional to them, they merely translated them into stone, making what changes were necessary to insure the safety of their construction, building on such origins the further development of their architecture. These architectural forms would be secondary and might, or might not, in the end become greatly significant. They resemble the parts of a language where circumstances have overlaid the original speech with another, perhaps conquering, idiom and the new words and combinations, expressing the old ideas at first, gradually mould these ideas themselves into something different with yet, here and there, a sudden illuminating glimpse of what the old has been.

We might easily lay too much stress on this distinction between primary and secondary forms. These dim origins have really more interest for the archeologist than for us, particularly as in most cases they are so uncertain that they remain matters for academic discussion with little possibility of definite solution. What probably happened in most of the styles of architecture as we find them completed was a mingling of primary and secondary, one form developed here and another borrowed from some different source, combinations whose totals, growing generation after generation, lost sight perhaps of their several origins and by logical and familiar use became great unities bound more strongly together by the interlocking fitness of the different parts than would have been possible by any slavish development from traditional origins. The growth of the language of architecture has followed very closely that of the languages of words and in both the beauty and power of expression depend little on whence the form or word has been drawn and very greatly on how perfectly that form or word conveys the idea it has been given to show forth, on how efficiently it does its work and how greatly it helps those forms or words with which it is connected, not only to make clear the meaning of the whole, but also to make that whole a logical and substantial structure worthy of any great significance which may underlie its conception.

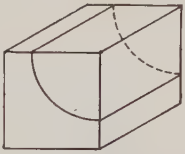
Now, in judging how perfectly any architectural form is fitted to the part assigned to it, we must remember its dual nature. It must be of such shape and size as to do its work adequately in the material of which it is made, must go further and look able to do that work and, since architecture the fine art is always more than utilitarian, we may add that each form must do its work and show that it is doing so with all the beauty that is possible. If the demand of use alone should be satisfied, giving no thought to proportion, to expression, or to beauty of form, architecture would cease to be a fine art; if expression and beauty only were considered, ignoring the demands of usefulness, it would become mere scenery. A building may have nothing to recommend it but the dignity with which it fills some need honestly and still maintain a certain value, but a building which does not fulfill its need is fundamentally false in its conception, can have no real value, can give no lasting satisfaction, for it is a lie.

What is true of buildings is equally so of all the details which go into the making of them. The smallest part should have its usefulness, should show it clearly and beautifully, but as we analyze more deeply, we shall find perhaps in every system a certain inconsistency, for some of these minor forms with shapes indicating a definite purpose have so little really structural use that they could be removed without weakening the fabric. In this case one of two things has happened. Either these forms show some facts, some part of the idea which otherwise could not have been made clear,—that is, they are symbols really advancing the expressive purpose of the design—or else the idea of use has been abandoned and, so far as these details affect the whole, the value of that building as a truly expressive piece of architecture has been lowered. Obviously, those systems where such inconsistency hardly exists, where almost every detail is evidently doing the thing it has been shaped to do and where the few that are not working physically are so planned that they are essential to the artistic or intellectual realization of the whole, are innately greater than those where unstructural detail, even properly symbolical, has been allowed to run riot. But perfection in any form of human production is so rare a thing that we must not judge from a standard impossible of attainment. We are trying to appreciate the beauty and grandeur of what has been done and what may still be accomplished and, if we are too superhuman in our requirements, the result in human hands will probably stiffen architecture into an epitome of dry facts where physical usefulness and the logic of pure intellect have driven away all that intangible beauty which may come from the expression of an ideal. Man's imagination and his faith are too varied and sometimes too impossible of definition to be bound by absolute rules and, if architecture is to express these greatest qualities, it must sometimes make use of symbols, which, so long as they are true in their expression and so long as the idea to be shown forth is not clear without them, will add to the total worthiness of the result. In architecture, as in life, if the spiritual fact is simple enough to stand clear in its own unexplained beauty, the symbol, which can add nothing to the reality, will cloud rather than clarify our vision, but too often both vision and reality are obscure and so the symbol becomes a means to increase our power of expression.

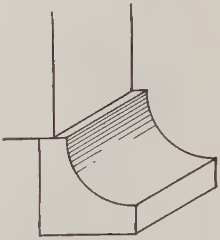
All this may seem impractical, somewhat far away from actual stone or wood or brick, but the forms themselves which, properly handled, can be so expressive of ideas are in their essentials quite simple things. Take, for example, mouldings. As we must constantly refer to them later in connections where a detailed explanation would overset the proportion of our analysis, it is well to stop long enough to examine their general forms and their functions. Mouldings are projecting or depressed lines of material whose edges are usually curved or beveled. They have immense possibilities, both for actual expression and for symbolism, for they can be so used in dividing walls, or crowning them, or providing bases for them, that they show many features of the design which, without them, would not be clear. Their deep projections and undercuttings, as they cast shadows on otherwise flat surfaces, may indicate the levels of different stories, or enframe panels to be set aside for decoration. Each system of architecture has developed its own group of curves and projections, fitted to help say those things which that system and, therefore, the race which created it, desired to say. Employed properly, these forms are among the great sources of power to an architect, but from their very variety and the possibility of continual multiplication and combination they lay themselves open to misuse and to contradictions that may go far to ruin an entire design. Every shape has an underlying principle and was developed to do definite work. Moreover, the function of each should be self-evident, for it must be remembered that these forms are as valuable optically as they are structurally and that, while rectangular blocks of wood or stone might serve the practical purposes of construction, they could not immediately show the different parts they were intended to fulfill, nor could they, in their clumsy squareness, actually play those parts so well.

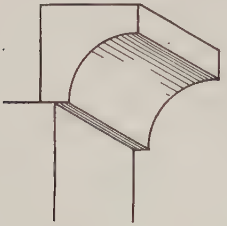
Now, in defining these functions, it will make our whole discussion clearer if we anticipate a more general consideration and point out an arrangement which, whether necessary or not, has grown to be recognized in architectural composition, that is, the custom of dividing the larger masses of a building into the three major parts of base, shaft and crown. It has developed naturally from the structural need of foundation, wall and roof and has, in its refinements, been accepted as an almost fundamental part of design. In its expression it makes constant use of mouldings and the base and crown of a building are so often composed of them that we call two of the four categories into which we divide most of the forms, base mouldings and crowning mouldings. The other two groups deal with the division or intermediate support of the shaft or wall and are named from their uses, separating mouldings and supporting mouldings. A base moulding, since it is primarily a foundation, must seem to be able to withstand pressure; its curves should spread out toward the bottom giving a broader surface of contact, or else its form should have the elasticity of a cushion from which the shaft may spring. A crowning moulding need give no suggestion of structural work, but should overhang the wall, showing that nothing further is to be expected above it and so definitely finish the composition. A separating moulding is simply a band which divides one part of the wall surface from another and implies no change in the structure of that wall, whereas a moulding of support must project with enough apparent upward push to be able to carry some overhanging weight.

The simple outline of a quarter circle will show us adequate base, crowning and supporting mouldings and, also, how the same curve used in different ways may be made to express different functions. Take a square block and cut from it a quarter circle whose radius is not quite so long as the side of the square. For the moment discard that part which is the segment of the circle and use only the remainder of the block with its hollow surface turned upward. This forms a simple base whose outward flare from any wall which may rise above it increases the space through which the weight of the supported body may be distributed.

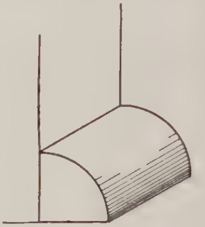


Now turn this block upside down, resting it, let us say, on the top of that wall for which it has already formed the base and placing it so that the curve projects outward from the surface of that wall. As the curve nears the top of the block it cuts more and more deeply into the material and seems to weaken it so that pressure exerted above the outer edge might break it. Its use, then, is not justified for support and from its very weakness it expresses the idea of finish, of there being

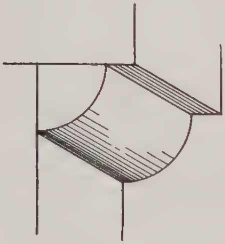




nothing more to come, and is, therefore, a correct shape for a crowning moulding. Take next the quarter-circular segment that was cut from this block we have just been using and so place it that one of its flat sides is parallel to and toward the ground and so that its curve turns back to some vertical surface above it. This again answers all the requirements of a base, perhaps more adequately than the other piece, for it shows greater strength. Turn it so that the flat side, still parallel to the ground, is at its top with the curved surface outward and a projecting ledge is created whose bulge seems to grow heavier as it nears the top and whose increased bulk of material at this point makes it appear ready to carry a weight above it. This then is a supporting moulding.

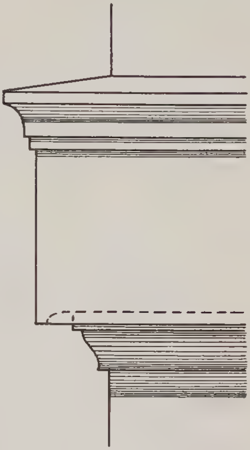


These elementary forms show the essentials to which most of the mouldings we shall study can be referred. The curves are possible of almost endless variety and refinement, of enrichment and carved decoration, but the complication goes further than that, for very seldom do we find mouldings used singly as they are worked into the design of a building. Usually they are arranged in groups which must also express as totals these same functions we have just defined for the individual mouldings. We shall encounter base, crowning, separating and supporting groups, each as evidently fitted for its work as the units from which it is composed, although in many cases the combinations will include most or all of the different types. This is particularly true of



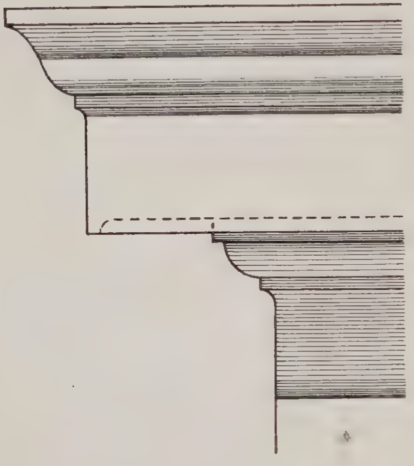
the larger groups indicating separation and the masses crowning the top of a design which we name cornices. In their arrangement, too, we often find an echo of that threefold division into base, shaft and crown which we have already mentioned. Here, certainly, it is not always essential, but it is of such continual occurrence that we must recognize it and it will be interesting later to notice how this repetition of function, carried from the great divisions of a scheme into its minor parts, helps to unify the whole and to accentuate the idea which underlies its conception.

A good example which will show all these possibilities in moulding composition is a conjectural group of separation making, let us say, some important division of a wall. True to its use, its most evident member shall be a broad flat band, projecting somewhat from the wall, not sufficiently to break the real continuity of the surface, but enough to form a flat overhang seemingly too wide to remain with nothing to uphold it. Under this we will insert a simple supporting member, not only symbolical of its function but really helping to regulate the balance of the projecting band. Now a small crowning moulding may be added at the top of the major separating piece, but it must be so evidently subordinate that there is no danger of contradicting the function of the group. It can be useful, however, in finishing the composition and perhaps really adds to its expression, for, from one point of view, a separating group of mouldings may form the crown of that part of the building below it, just as a supporting member answers the need of base



SEPARATION

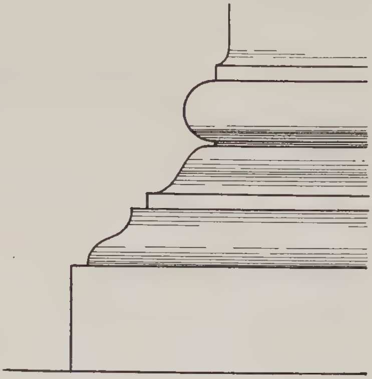
to that part which rises from it. We have in this hypothetical scheme three of the four types of mouldings, all indeed which can easily be combined, for bases and supports doing the same sort of thing in different ways can hardly be used together and we have, in this combination, that same threefold arrangement with the support answering the function of base, the broad band above it that of shaft, and with the small crowning member to finish the top.



CROWN OR CORNICE

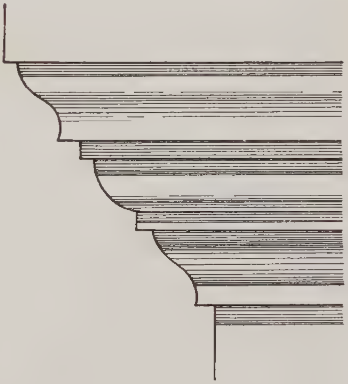
In a cornice these same elements may occur but with a different emphasis, for here not only must we express the function of the crown, but also should we create a projecting mass to help throw the rain-water away from the wall underneath. The broad flat surface which before suggested the idea of separation may now overhang so greatly that all such expression is lost and its under surface may be cut away so that water will drip from its edge and not run back to the material below, where as before we may arrange one or more elements of support. The crowning member also should become dominant, heavy enough to tell in relation to the mass of the whole building. This feature may be hollowed out behind to form an actual gutter and it is interesting to note that most of the shapes which are appropriate as crowns also lend themselves to this gutter form and so are doubly expressive.

Base and supporting groups are, as we have noted, fitted to do similar work, but outwardly in a manner almost the reverse of each other and from their nature they are less likely to show the threefold division among their members. They are composed, as we should expect to find them, largely of those parts which actually relate to the function of the group, set off, as all combinations of mouldings should be for optical reasons of clearness, by subordinate separating lines. These groups do perhaps more actual physical labor than the others as the reiteration of their shapes suggest and so, often, are more truly functioning parts of the structure, almost never merely symbols.



BASE

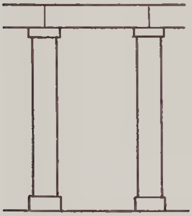
We have discussed these things here in detail because in some guise or other their principles are constant in all architectural design. We shall find different uses for mouldings as we progress from one type of work to another. In themselves, of course, they are only means to an end, for they cannot be expressive of ideas beyond the structure, and so we



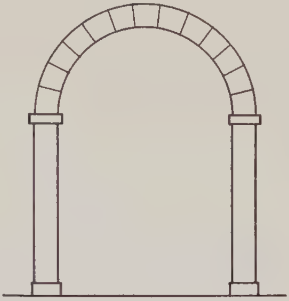
SUPPORT

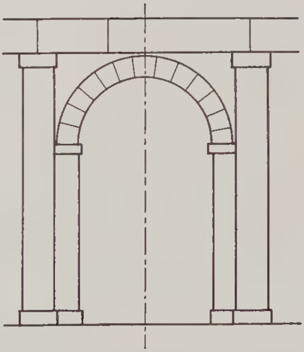
must not look to them to show forth ideals. But the robustness or delicacy with which they are handled increases the robustness or delicacy of the whole; the shapes which they are given are the echoes of what is beautiful and fitting in the minds of the builders who, by making every part responsive to the ideas of that whole, in the end produce a structure through which the ideal can speak. If they are used only as surface decoration and are not truly expressive, then we may expect the same lacks in the other parts of the design, for the point of view which allows any member which has structural possibilities and origins to be used only to create a pleasing exterior, without relation to the meaning of the forms, gives rise to such contradictory ideas of architecture that its real structural and intellectual value may cease to exist. Some such uses, however, not only in regard to mouldings, but in other and even more striking forms, have been so continual and, it must be confessed, so admired, that we must stop to note them so that we may be sure at once from what point of view we ourselves are to look at the subject.

It will make our point clear enough for the time being if we analyze the relation between columns and their two types of superstructures, lintels and arches, showing how they have been used, with what logic or what inconsistency. A column, of course, is an upright shaft, designed to support something. A lintel is a generally rectangular block stretching from the top of one column to that of another and forming the foundation, so to speak, of whatever wall is to rise above it. Its length is restricted by the size of the block which it is possible to cut and place and by the strength of that block, which must be heavy enough so that the superimposed weight shall not break through the center of its span. This more or less fixed length regu-



lates the spacing between columns where lintels are to be employed and, therefore, if longer distances are necessary or desirable some other device is needed to bridge them. For such a case we have the arch. It has developed various shapes, pointed and elliptical, but its typical form is that of a semicircle. It is composed of a series of comparatively small, blunt, wedge-shaped pieces fitted together and so locking that pressure exerted from above serves to increase its strength. Columns may support lintels or arches with equal propriety, but since lintels and arches are definite structural forms with different powers inherent in themselves, these qualities should not be contradicted in actual use and we can lay down for ourselves the general rule that if the employment of arches or lintels is a debatable question in any design, no arch is appropriate in spanning a distance which can be bridged by a lintel.





Now, let us consider another imaginary composition. Suppose a condition where two columns uphold an arch. On either side of this central group set up another column tall enough to rise above the top of the arch and span the distance between them with a lintel. The structural inconsistency is evident. Either the arch is bridging a space great enough to make a true lintel impossible, or else that space is so narrow that an arch is not needed at all. In one case the lintel must be false and composed of a number of blocks built into the wall and, therefore, with its supporting columns, a piece of mere decoration pretending by its form to be real construction; in the other case the smaller columns with their arch form nothing but a screen which could be omitted without loss of structural strength. Logically, one group or the other is unnecessary. This may seem, in words, a curious combination to presuppose, an arbitrary piling up of contradictions, but, as it happens, this very thing has been used so constantly, has had the sanction not only of modern times but of a long historical development and has, from the point of view of decoration alone, been employed with such effectiveness that it has become part of the stock in trade of the architect. Many will defend it because of its approach to beauty, saying that to forbid the use of this and similar compositions is to demand an absurd purism in architecture that will too greatly narrow its possibilities.

We are not entering into any controversy in thus trying to define our own working point of view, but, as we consider the different styles of the past, it will probably become clear to most of us that the greatest achievements are those where such inconsistencies in the logic of structure and decoration do not occur; that the most virile periods of civilization had too much to say and too clear an idea of how to say it to muddle their meanings with such conscious striving for effect. Indeed, this redundant use of forms indicates a civilization already self-conscious and given over to luxury. Crude strength, even coarseness of detail, so long as it is honest, may rise to greatness where elaborate convention and richness, no matter how gorgeous its materials and how suave its workmanship, must remain insignificant if it is not founded on truth. Again it is with architecture very much as it is with life that superficial appearances are not always safe guides to our judgment. It is the underlying facts alone which, if the whole structure has integrity, can make these appearances magnificent. An honest building can stand any criticism of its self-expression for, whether we like it or not, it is founded on something real.

Naturally, in the general scheme of a building, these considerations which regulate its smaller details and its larger structural members must still be followed to give the whole complete expression. The first demand is that it shall be designed to fit the needs for which it is to be built and to fit them with economy and convenience. Its arrangement on the ground—its plan—must be fundamentally one of use, but, even here, such careful thought should go into the composition that the shape should be orderly and, perhaps, symmetrical. The walls to be erected on this layout, whether they be of solid and enduring material, or a more symbolical casing of some inner structural core, must tell the story which the plan has made inevitable, but with increasing detail in the arrangements of doors and windows and in the comparative heights of the greater or smaller rooms, so that the whole scheme becomes ever more easily read, more frankly expressive of its purpose and, as these details are woven into the fabric, the ideals which the building is to house will show themselves more or less clearly as the proportions on whose adjustment the orderliness of the composition depends allow it to approach toward beauty.

Too much emphasis cannot be laid on the need for order and proportion, for order in proportion, which, alone, brings rhythm and balance and harmony. It is the quality, or combination of qualities, upon which all that is not merely useful in architectural design depends as the groundwork for its expression. No matter how delicate may be the refinement of all the parts of a building, even if, in themselves, they have attained that subtle adjustment which we call beauty, their combination will fail unless they are bound to each other and to the whole by a careful system of interrelations. Indeed, so vital is proportion that it alone can raise mediocrity to value. Genius must bow to its laws and, even without genius, a knowledge of them may produce greatness. Most styles of the past have used some definite system, fundamentally mathematical, based on either some fairly obvious principles of geometry or some more delicate numerical relationships and we shall see how deeply dependent on them are the artistic results that we shall analyze. It is enough for us now that they exist and are necessary; that there must be no guesswork, nothing haphazard in the creation of any work of art; that the greatest glory of great artists has come through their recognition of restraining law.

It would be interesting, if we could, to trace how far these laws of orderliness and proportion are man-made; whether they are creations of his intellect or whether, in part, discoveries of some deeper order that may be working through all nature. Geometry, on which so much of architecture is based, is itself a harmony of mathematical truths which exist irrespective of man. It has been his place to realize, not create them. The subtle rhythms which poetry and music share with architecture increase the certainty of an underlying relation. And with painting and with sculpture we find hints of something unalterable directing man's inventiveness and connecting all the phases of its expression. Buildings are sometimes likened to the human form or to a symmetrical grove of forest trees. Such visioning appears either fantastic or sentimental, for in no way could sane structures take such shapes,—their purposes are not those of the more pictorial arts and, strictly, their forms should not be infused with subject beyond the usefulness—but it is possible that what may seem at first mere rhetorical exaggeration has insight great enough to grasp a little of the laws of proportion that nature herself has used and point the way more surely to the realization of beauty. For beauty, in the end, is sought by all the arts, no matter what laws may govern them, and pure beauty, although we may suspect that some great natural law may exist on which it depends, is produced by no law which we yet understand. We must always strive for it in our work and we are fortunate if we satisfy ourselves once or twice in a lifetime, more than fortunate if others will agree in our satisfaction. And now, as we study the great buildings, one after another, that the past ages have left us, although we can show what many of us agree are points where real beauty has been attained, it is each individual who must make the decision of what is beautiful to him. The known laws can be stated, the systems of construction analyzed, the historical expression defined. These things become obvious but, as yet, no man can dictate to another what that other shall consider beautiful. That he must find for himself.

Surely, however, beauty can never be produced by mere profusion of ornament. Architectural decoration is as much subject to restraining laws as any other factor in a composition. Sculpture, or color, or both in combination may be great aids in enriching a building, but unless they are made subservient to the general design, unless they add to the truth of its expression, no intrinsic beauty of their own can prevent their detracting from the value of the architecture. No instrument in the hand of an architect has been more often misused and yet, rightly guided, no instrument has done more to increase man's delight in the structures around him. Decoration, therefore, must always be considered and the manner of its application analyzed in forming our judgment of any architectural creation.

From an ideal standpoint the most perfect ornament is that which exists when all the working members of a structural scheme are so wrought into beautiful as well as useful form that no other decoration is desired. It is seldom that such complete adjustment exists and it is true, if more than the mere abstraction of construction is to be expressed, that such an adjustment may be too restricting. Free sculptural forms and appropriate color are too valuable in their power to show forth ideas and too beautiful in themselves to be shut away from their proper place in the most abstract architecture, but they must be made a part of that architecture. Unless they in some way, by their position, their lines and their masses, help to accentuate the fundamental idea of the building, they must be so definitely set aside, by panels or some other devices and in places where there can be no conflict with the working members, that the eye immediately recognizes their purely decorative purpose.

As we examine one style after another we shall find statues and reliefs used in the most appropriate and telling ways and combined with color to produce incomparable richness; we shall find patterns woven into walls to create a quality of delightful intimacy; we shall find mouldings and capitals and other structural features carved and colored so as to increase their expressive value many-fold; and, on the other hand, we shall find masses of sculpture or of painting running riot over great surfaces where they confuse the mind and blind the eye to all the dignity of honest construction which may underlie their unrestricted imagery. All architectural ornament must be made to serve the idea of the building on which it is placed, for no structure worthy to house an ideal can be made merely the background for a sculptor's chisel or a painter's brush.

STILL one more question remains to be considered in this preliminary discussion of definitions and underlying principles, for all that we have so far been trying to do is to gain enough knowledge of the elements to let us look with some intelligence at the forms which compose the well-known styles of architecture. Already, perhaps, the impression has grown that these styles stand apart from one another, each with its own development, its period of culmination and its decline, separate entities with little, or comparatively little, influence on one another. And when we study them, as closely as we can in our rather restricted space, although we shall consider how one system has been affected by its predecessors and contemporaries, the emphasis which we must of necessity put on the unit we shall be studying may even further tend to separate them in our minds. Such separation, however,—distinct as each style is at the period of its completion,—is very far from the truth. All architectural evolution, like the growth of civilization, has been one great stream of accomplishment, showing on its surface, perhaps, phases of stagnation or even of retrogression, but at its lowest ebb seeming always to gain power for different if not greater achievement. Goethe says in his *Winckelmann*, that all art is "a vital process that has an imperceptible beginning, a gradual growth, a brilliant maturity and a slow decline, like any other organism, only in this case manifested through a multitude of individuals." This is very true, specifically, of architecture, so far as it goes, but we shall find also that as one style has followed the one before it, it has drawn from its predecessor, perhaps already in decline, or perhaps still in the period of its greatest vigor, such elements as were needed to help in the fulfillment of its own mission.

We shall follow in our discussion the usual historical divisions into ancient, mediæval and modern. In the ancient are Egypt and the other oriental nations, leading us to Greece and Rome. In the mediæval we shall find what we call the Romanesque, a group of types evolved by the nations of western Europe on the ruins of Roman civilization and developing into the great masterpiece of the Gothic; in the modern, beginning with a conscious return to the examples of ancient times, all the movements which have produced the somewhat questionable eclecticism with which we surround ourselves today. We might divide and subdivide the larger groups, confusing our minds with terms and ideas of separate entities. Some grouping is necessary in order to deal with so great a subject at all, but unless we remember that each race has had but one fundamental culture, although the changes in the development of each are so arresting that they may easily blind us to its real continuity; unless we realize that each accomplishment is a milestone on a continuous if sometimes divergent pathway, we shall lose all perspective and, so, all true understanding of the past, all possibility of progress in the future.

The work of Egypt and Greece and Rome is the result of movements whose active development has ceased. Egypt is so separated from us by the lapse of centuries, by the strangeness, to us, of its viewpoint and by the mass of accomplishment of later times, that in considering its architectural legacy to us it is easy to forget the changes through which it passed in its long period of life, easy to think of it as a unit and this is particularly so because of the tenacity of the racial characteristics which governed it. It must have had its relations with other styles, however, and its influence will be present, if indefinable, in the Greece we shall come to know, the Greece which, drawing to itself all that it needed from its neighbors, fused that all in the light of its own incomparable genius and set up a landmark on our pathway whose eminence has since scarcely been reached. Rome followed Greece, absorbed, politically, almost the entire known world and yet founded her achievement in civilization on the Greek accomplishment, debased its quality and added to it features drawn from the other nations which composed the giant empire, dignifying the mixture by its real power of engineering inventiveness. As this empire disintegrated, its eastern half swung back even more into the influence of the Greek races and produced another architectural phase which we call the Byzantine, while in the west, as the present nations of Europe grew to consciousness, they continued in a groping way to build, using so far as they were able what Rome had taught them, until, their own powers increasing as they fulfilled the new needs resulting from the growing intensity and safety of their civilization, there appeared another great architectural achievement, the Gothic. Culture continued its progress, knowledge increased and communication between the different nations became easier and more constant, therefore the modifying effects on all artistic expression were continually complicated. This is the period called the Renaissance, the rebirth, in which not only the more complex present around them insistently modified men's productions, but in which, also, men's minds turned back to the work of the ancients, especially to Rome, for Greece, now in the hands of the Turks, was closed to them and architecture, after a period of brilliance, gradually became little other than conscious copy of dead prototypes, stiffened under hard rules that absorbed much of its vitality and led us into the dangerous byways from which we have not yet altogether escaped.

The glories of Egypt and Greece and Rome have passed from the earth as developing forces. We can look back at them as completed growths whose perspective can be realized and discuss all the phases of which the remains give us knowledge, but their influence lives on even to the work of today and all that have followed them, Romanesque, Gothic and Renaissance, French, Italian, English, German or Spanish, are parts of one great development, mutually interacting and still continuing. The effects of the different national and racial characteristics may be clear; the periods of culminating success may show distinctly,—the early ones as finished and as definitely featured as though all growth were over,—but the lines of progress which began at the collapse of Rome are not quite dead. They still continue, through all their ramifications and their blind twistings, with essentially the same materials and with mutually understandable ideals.

It was in the later stages of this European work, as it was also, perhaps, in the declining and sophisticated periods of Greece and Rome, that the architects in our modern sense became controlling figures in architectural design, moulding through the incongruities of their individual personalities those forms which had developed heretofore with real national significance. Much that these men—among them some of the greatest artists of the world—accomplished must stand with the masterpieces of architecture, but their conceptions, as they became continually more a matter of personal expression, necessarily tended to break down the old systems until such confusion has finally resulted that today empty replicas of the work of almost every nation and every age stand side by side in our cities to attest the depth of degradation to which architecture may fall. This is not an arraignment of the men who are working now. New forces are growing around us and the old nationalisms seem to be lessening the vividness of their expression. It may be that the architecture of the future will unite all the petty streams which seem to be dwindling to exhaustion into a world expression, but our place is not to predict this future, certainly not until we have looked carefully at the past.

What is important for us to realize, however, is that since architecture has been taken from the hands of the builders of the old types, since it has become the specialized thing it is today in the offices of the modern architects and since it is these architects to whom we must look for the preservation, for the re-creation almost, of vital architectural ideals, the responsibility which has fallen on the architect is a very grave one. We are setting out to study the accomplishment of the past with the foreknowledge that we can find through its buildings a broader understanding of all its life. We can do so because these buildings, in just the forms in which they were erected, were necessary parts of that life, in certain ways controlling elements, not only expressing but moulding that life itself. Such a force architecture should become to us. There is so much of beauty and nobility and truth possible in it that, as it houses our daily lives in all the multitude forms of modern activity, it should be made, through the creation of an orderly and, so far as possible, beautiful environment, to increase the expression of that order, that nobility and that beauty in other things which, while they must always exist, so often seem to lie hidden under the confusion of those very activities which we call progress.

CHAPTER II

EGYPT

THE progress of civilization has been slow and long. It has wrought a constant change and the external factors of its growth have been as varied as the human qualities have been uncertain. We may not presume to judge the values of this progress, either in the large stream of its development, or at the varying stages which history recognizes. The worthiness of its advance is not our province, but the manner of its movement is deeply significant to us. Civilization has moved forward by complication. The evolution of the human race has been through adaptation to increasingly specific needs, and civilization is the flower of evolution. All social life has meant the breaking down of that isolation which was the original condition of man's existence, and the struggle has brought the complication which we acclaim progress. Civilization has grown by meeting the needs, both physical and social, first of the individual, then of communities and finally of combinations between communities. Our interest does not take us to the beginnings; does not seek to conjecture the rudiments of mechanical striving, or the first flashes of a possible deeper meaning. We are seeking to understand accomplishment in the progressive stages of its complication and Egypt is the first great milestone on our pathway.

To herself, Egypt was both commencement and completion; to us, her product marks the full attainment of the great era of beginnings. In her, the isolation of the individual and of the smaller group had been broken down, but the isolation of the nation, in spirit and accomplishment, remained, hemmed in at first by the barriers of geography and later by the arrogance of self-satisfaction. Even in her youth she did not stand alone. Already greater complication was at work without. Chaldæa, Babylon, Assyria, Babylon again, and Persia were Egypt's neighbors, sometimes her victims, sometimes her conquerors, but they merged and complicated and passed, while Egypt remained, simple, self-centered, hardened under the formula she found sufficient. She has become a gigantic symbol of the distant and romantic past; of the past which is conjured into being by our imaginations. We see her straddling the horizon from the unknown into history and facing the dawn of civilization; we see her, even in her old age, imposing upon the future a legend of mystery and magic, of more than human accomplishment and of secret wisdom that had come from the beginning of the world. Some historians tell us that everything that we are and think, at least began in Egypt. However that may be, Egypt is dead, lay long, mummified under the desert and it is hard for us to understand her thoughts. Yet, we can see her in her entirety, through the perspective of the ages, complete, foreshortened. Her records have been recovered from the sands, her great buildings still stand stark above the ashes of her throbbing life, even the bodies of her kings and nobles greet us, helpless in their revelation. The facts of Egypt's doing are open to us; Egypt's instinct, behind the doing, alone must be read between the lines, must be read across the gulf of centuries and the barrier of race. We must strip away the legend, renounce the feeling of mystery and magic and search the human Egypt.

We are working toward an understanding of Egyptian architecture and of its place in the development of architecture in the west; toward an interpretation which goes beyond what the buildings alone can tell, or, at least, can prove. Architecture is but one phase of the expression of civilization, but it touches life on so many sides that often no other single phase is more illuminating. Already we have outlined the points of contact, have shown how the requirements of daily life fix the big forms and uses of the buildings and how the spirit of the builders imbues the fabric of the work with its own essence. If a nation has been great in its mechanical ability, if it has had the quick intellect to grasp the fitness of form and usage, if it has been imaginative or practical, if it has turned to symbolism or expressed itself through a power to deal with essential facts themselves, if it has been spiritual or commercial, religious or warlike, if it has had all the great qualities, or some of them, or none of them, the truth has been revealed pitilessly to the future by that nation's deeds and arts and by all the remains of thought and action that it has left scattered over the world. Not every quality will be inherent in every phase. The completeness of expression must depend upon the power of the act or thought to touch many or few facets of the national life and so, to read the nation, it is necessary to compare and to compile, eliminating the individual, so that the essential nation may appear. This must be our interest in this brief survey of the accomplishment of Egypt, so that, above the direct expression in her architecture which the ample facts would clarify for us, we shall be able to accept or to reject those qualities of character which the buildings could but suggest.

There is a theory of philosophy that every form in which man has visualized his conceptions, that every impulse which governs his artistic expression, has been drawn from surrounding nature. We cannot escape consideration of this sweeping statement, in its abstract application, as we analyze the forms of architecture, but there is a practical physical significance to the idea that is fundamental. The nature which envelops us, of which we are a part, is at the bottom of all of us. The land on which we grow moulds our bodies by the labor it exacts and by the food it gives, and permeates our minds through the pictures which every glance impresses. The material it provides controls our building and the obstacles or advantages it presents react upon our innate powers to determine the progress of our growth. This was particularly true of Egypt. It is interesting and pertinent to us that the long self-development of the race was surrounded and to some extent controlled by a nature so pronounced in character, so in tune with what the race became, that a vision of it is necessary to an understanding of the cultural achievement. The land of Egypt was in the people and came through them into the expression which they made their own. It is a narrow valley, very long, gouged between flat-topped mountain ranges, in a rainless country that would be as the desert that surrounds it, were it not for the great pulse of the river Nile, which every year brings with its flood the possibility of immense fertility under the sun's fierce heat. It is a stream of teeming life bordering the living river and imprisoned by desolation. Life, abundance and isolation are proclaimed as stark facts by a dominant nature, with a glare of color whose intensity is almost negatived by the blaze of the ever-present sun. Here the people of Egypt, more than usually homogeneous, it seems, in race, generated for untold centuries, grew to self-consciousness, stiffened under self-approval. The sun and the Nile and the barrier, desert mountains, almost explain the mind of Egypt.

It would be easy, with a knowledge of the architecture, to form a preconception and to use for illustration only those factors of Egyptian life which, on the face of things, agreed with the suggestions of the buildings, but this would bring a biased Egypt and a false architectural significance. It might, indeed, magnify the architectural expression out of all proportion for, while the developed building of a nation cannot but be illuminating, it does not follow that every nation has made its building primary among its expressions. We are studying Egypt to understand her architecture, to confirm the impressions which the buildings give us, and, to put the architecture into proper scale with the whole subject, it will be necessary to see the broad outlines of her whole endeavor. The details of events dwindle to insignificance. If we could follow the growth of every building and all the minor changes in mechanical or expressive usage which, magnified into the mass, produced the gradual big development, then the small happenings and personalities would become pertinent and necessary. We shall but follow the big stream seen in the perspective of its distance, to find, beyond its rapids, its slack-waters and its twistings, the real direction of its course.

We cannot date the beginnings of Egyptian history. It may be that the first dim reflection of events filters from full five thousand years before the opening of our era. Egypt lived an incalculable time with an astonishing vitality of character. What is important to us is not that historians, for clarity, have grouped her whole life into the periods of Old, of Middle and of New Empires and have subdivided it into thirty dynasties according to the changing royal families; what is important, rather, is that the Egyptians themselves made no such separation. Where we tend to think in sections, the Egyptian realized continuity, a continuity which first presented itself to history in the guise of changeless uniformity. This was in the Egypt of the legend and the research of modern criticism has gone far to discard the immobility. It has made the Egyptians human, has checkered the history of their nation with superficial happenings, but it could not break the continuity. Even the fundamental changelessness remains. Egypt was always Egypt. She was turbulent at home, but each upheaval sought to reconstruct the combination of facts which had weakened to make the upheaval possible. She was warlike among her neighbors, but there was no war she waged that was not for wealth and glory. It is true the balance changed. Where, through the centuries, the glory had been for Egypt, gradually it shifted to her enemies and what, at first, had been a struggle to augment the trappings of her life, became, ever more desperately, an attempt to maintain life itself. There is no big growth in point of view throughout the events of Egypt's history. The facts we know are few in the period when her combination of facts was formed. We find Egypt, from the first, self-conscious and self-centered, and no details in her actions indicate that she questioned the position she had taken. It is not that distance blinds us to some reality of change. Had there been such the very distance would have made its big direction all the clearer. Egypt made her own life and found it to her liking. She spent her energies to preserve its even tenor, but, since change is an unavoidable accompaniment of time, Egypt weakened under the formula that she would not alter and finally succumbed to the complication that had grown among her more flexible neighbors.

There is a point in all this which will advance our inquiry. Through the centuries, as the big facts of her life endeavored always to circle back to the idea she had made her goal, her frame of mind gathered a tenacity that could not but be perpetuated in her expression. It is true that the circle of events was never closed, but spiraled to a climax and diminished as her physical power waxed and fell away. It is true that her expression changed, for it is not possible that generations shall exactly reproduce themselves. Egypt had before her for inspiration a seemingly changeless nature pulsing with the Nile, but each beat carried her further toward the end. It was not her desire, but her misfortune, that she could not maintain her formula. The demand for continuity, for reproduction, was in her spirit and we shall find it in all the phases of her life.

It was the matter of life which provided the aim of life, not the possible problems which existence may present. There seems no evidence that Egypt was ever a problem to herself or that she took time from practical concerns for intellectual questionings. She was very busy living; living in a routine that seemed to her divine in its establishment. At a glance, there was little difference in this order from the systems of her neighbor nations, but there was real difference in the material from which the order grew. The early powers of western Asia were accumulated from small nuclei by conquest and complication and, as the strong hand shifted, the power assumed a changed complexion. Egypt was organized by concentration of a single potential nation, was ruled by a native priest-king who became the epitome of his people and, perpetuating the divinity of his race in his own family, was deified into the symbol of Egypt's life. The absolute monarchy of Egypt did not contradict the nationality of Egypt, rather, gathered it into the possibility of more coherent expression. The Pharaoh governed the people completely, but he governed because the priesthood, of which he was the head, saw in the assurance of his position the continuance of their privileges, and because the people realized, in the rule of priest and Pharaoh, the best possibilities of their own material life, as nature and experience and their masters had taught them to see life. It was a circle of interdependent causes, but it was static because the elements always reduced to the same fundamentals, to the nature and people of Egypt. There was nothing in the development that did not seem to the people natural and expedient and divinely sanctioned. There was for them the possibility, often the actuality, of misery. The master might oppress them, but so might nature. If they failed in their observances the gods were angry. These things were part of life and yet life was good and desirable, and there is evidence that it was happy. It was so ordered, so completely arranged in its observances, that, these accepted, further care might be discarded and the joy of physical existence given free reign. And so, an acquiescent nation confirmed the rule of priest and Pharaoh and, because the idea of priesthood and kingship had grown from the mind and blood of Egypt, rather than been imposed upon it as foreign fashion, the expression which wealth and power made possible and permanent was the expression of the essential Egypt.

All this reacts upon the conclusion which we drew from the continuity of the events. Had the nation been fundamentally dissatisfied with the organization, her restlessness, during the centuries, would have moulded both structure and events. This did not happen. The structure remained and the motive back of the events was changeless. The concentrated ordering of life and the physical foundation of the formula which governed that life gave Egypt a power of resistance which has been unmatched in history; of resistance but not of growth, for Egypt settled into the rut of satisfaction. Events and social organization tell us much the same story, convince us of tenacity, of the desire to resist change, and, at the apex of the social order, we find the guiding symbol of the national reaction. The Pharaoh assimilated Egypt, magnificently expressed her. His life made the life of Egypt glorious before all the peoples of the world, his expression has made the fugitive expression of his people an eternal fact.

There are circumstances in Egypt's action that might disturb our concept of her changelessness and self-development; there are details in her internal order that affected her expression and her architecture. We must consider these before we merge the thread of our discussion in the all-absorbing thought of Egypt's life, religion.

We have emphasized the isolation of the nation behind the natural barriers of her geography and within the restriction of her mind, yet Egypt did more than wage war against her neighbors. She developed commerce with them and even indulged in exploration. She forced or bartered the things she wanted from an outside world and took them to herself, and in doing so remained herself because the things she desired were physical rather than of the mind. She brought wealth and jewels and spices and materials to magnify the glory of her own expression, but she disdained ideas that were not begotten in herself, so that, in the end, she disdained ideas at all and died. She brought nations of slaves to carry out her projects. If they escaped, they took away some tincture out of Egypt and left nothing but the labor of their hands that had been dictated by the mind of Egypt. The isolation of development was a real thing and it was a unique thing. In this one great growth alone can we seek all the heredity of an age-old culture within itself.

Tenacity, concentration, simplicity of self-development, are characteristics which we must hold in mind, for we must not forget that our purpose is to center upon the architecture and the qualities which it absorbed. Add to these three, now, the strong intelligence to invent or find the practical means to a given end. The social order was more than a hierarchy of prerogative; it was a material organization which made prerogative an advantage and encouraged the means to increase production. All of the land that was not immediately the domain of Pharaoh and the priests was divided into provinces, which brought the exactions of the system more directly to the people, but whose records often give quaint touches of a real humanity that permeated Egyptian life. The mechanics of the system are not pertinent to us; even the humanity, in its kindly sense, we cannot claim to have been a dominating quality. It is the efficiency of Egypt, to use a modern word, that attracts our interest. The political division of the land was permanent, and the yearly swelling of the Nile continually threw down the boundaries which had to be reëstablished, and so surveying was invented, and a rough geometry which, probably, was father to the science that we know and which we shall find was needful in the architecture. This is but one example, the most intimate to our future inquiry, but wherever Egypt felt strongly some physical need, some requirement for her material life,—for irrigation, for communication, for construction,—she had the mind and the mechanical inventiveness to meet it. She conquered the matter of living, simply, often primitively, although we tend to lose the simplicity under the intricacy of her embellishment. Her efforts discovered much and yet often stopped on the verge of just that more which would carry them to a higher level. Egypt was satisfied with the material plane. Her frame of mind desired results and this fact is very clear in those conceptions which cease to deal with earthly life and, through religion, cross the borderland to another world.

Religion is compounded from fear and from desire. It may reach to the highest summit of spiritual beauty, but in Egypt it did not do so. There are evidences of a symbolic interpretation of life and death and life again, and of an approach toward a monotheism which sought to combine the myriad manifestations of deity, which the people worshiped, into a conception of one supreme cause and control of existence. How deeply this more pure belief permeated even the priestly class does not concern us; it left no significant mark upon the expression of the nation, and it did not reach the people. It would have been surprising had it done so. Egypt's ideal was in her physical life, her fears were of those things which threatened its fortunate continuance, and her desires were for its permanent establishment beyond the accident of death. Existence depended upon the benevolence of nature and nature, in an all-inclusive sense, was deified, but Egypt, the people, had not the spiritual imagination to grasp so great a concept. The accidents and favors of this natural world were manifold; the powers of sun and river, of fertilization and desolation, were seen isolated in the simplicity of practical minds and, becoming gods, assumed personalities in which symbolism broke down before a naïve belief in their actual existence. Animals, both friendly and destructive, were sanctified in thanks and propitiation. The Pharaoh who wielded the might of life and death was a human god. A swarm of gods almost stifled the existence of Egypt, and the priests thrived on their exactions. They are hardly to be blamed. It was the people who had seen these gods in nature and, if the nourishment of all this divinity straitened the physical means of human life, unnourished and resentful, the gods might stamp it out entirely, not only in this world, but in the next.

The concept that all early races, dominated by subservience to religion, live by the power of the imagination is restricted by this manifestation, or, perhaps more accurately, our definition of imagination must be widened to include the theology of Egypt. It is true that fear and desire in the Egyptian mind saw gods at every turn,—imagined them,—but the gods, once recognized, partook little of any higher imaginative quality, never deserted the nature from which they came, and did not intervene to cause a spiritual questioning. They gave their gifts, or withheld them, and Egypt rejoiced or groaned. It is not for us to criticize the gods more than the priests, for Egypt had created them in the image of her own mind and they answered the purposes of her existence. In the expression she has left, we continually see the nation bringing gifts and receiving in return the abundance of her desires, but we cannot find an Egyptian prone before the image he adored, in agonies of conscience. Conscience is the sting of the imagination and Egypt, in any higher sense, was not imaginative. Imagination would have demanded growth and change and, in the popular fundamentals of religion, the motive changed no more than did the motive behind the national action.

And if Egypt lacked the imaginative force to become spiritual in her religion, she also did not develop her intellect to build, in any true sense, a philosophy of life, or to delve into the metaphysical problems of existence. She assuaged her own fears and promised herself the realization of her desires. She did not weigh and balance facts, she imaged them in her mind with the same formulated planes in which she carved her statues. She had the power to believe fully what she wanted to believe and she bridged the gap which, open, might have tumbled all the enjoyment of life into the abyss of death. Egypt conquered eternity. All her physical fullness of existence was petrified in her assurance of a further life and, amid the daily striving which every individual experience found fugitive, was constant preparation for a future which fond desire assured would endure forever. But even in this assurance there was an "if." Had the national mind been more really imaginative or philosophical it might have bridged this "if" also, but Egypt needed concrete facts to build on, as much as she desired results. The future life was sure and permanent as long as the human body was complete, or, failing this, so long as some image or picture of it remained. Eternity was attached to some fact of this life; its enjoyment depended on the bodies or images or pictures of the desired servants, on the objects of necessity and luxury, on the supplies of food that were buried with this earthly fact; its ease depended upon the magic formulas which accompanied it. Egypt believed that man possessed a physical body and a spiritual double, but the desires of both were pinned by her physical ideal of living to the things that life on earth might give, for, here again, imagination did not carry beyond the realizations of the senses. At death the mummied body was buried in the greatest security that practical Egypt could devise and with all the appurtenances that resources and foresight could arrange. The double lived with the gods or revisited this earth if these appurtenances survived. This "if" in the assurance of eternity is the secret of much of Egypt's permanent expression. Her physical-mindedness, her unimaginative belief that all the future, which was conceived in terms of present, was dependent on the preservation of the present, has been a great factor in the completeness of her revelation.

It is possible for us to visualize these fundamental questions only in their broadest masses. We must state conclusions baldly, unsoftened by the details, unrefuted by the transient and personal reactions which might sometimes seem to contradict them. But the details could hardly alter the conclusions, and Egypt's revolts against the contradictions confirm the tenacity of her resolve to live her own life. The very baldness of our statement will clarify the interpretation of the architecture, for our discussion is reaching into those qualities of Egypt which created her indirect expression as well as regulated much of her practical production. Religion influenced almost every act. It formed an aura around Egyptian life. It dictated what in the national expression should become permanent. Physical existence was the ideal, but earthly existence was proven transitory and Egypt was satisfied that its surroundings should remain so. The gods, however, were eternal, and man, once dead, became eternal if he had prepared wisely. The gods, then, and the dead must have eternal surroundings, and Egypt was so practical, so mechanically efficient in getting what she wanted, that in the trappings of her ideal, she has almost succeeded. This is the turning-point in our discussion. Almost all that Egypt has left us was founded in her religion, but her religion grew from her life and from the nature which lay back of it; and her mind which evolved the religion was so tied by its stunted imagination to her conception of the physical facts of life, and to the actual forms of nature, that the eternal surroundings of her dead eternity reveal and magnify her daily living.

It is here we leave the more impalpable Egypt that we can read only through her recorded actions and through the remains of her definite expression, to visualize the illuminating phases of that expression which parallel the architecture and of which the architecture is one of the most important. We must search in the sculpture and the painting, in the fragments of literature and in the minor craftsmanship a confirmation and a precision of the qualities we have read from the beliefs and actions of the nation, so that we may check them against the showing of the buildings. We may postulate developments that were practical in their fundamental purposes; growths that reflected the mind of the massed nation but were concentrated, in their flowering, by the centralization of the wealth and power.

We cannot expect conceptions beyond the combined echoes of a dominant nature and a physical existence, for imagination did not concern itself beyond these things.

Egyptian sculpture has won a place among the great sculptures of the world. And it was great. In its beginnings, it was tremendous. Egypt then was growing, finding her self-consciousness, creating her life. Her intelligence and observation went far, opened possibilities that her imagination and intellect could not probe. Her desires found the images which satisfied them in the actual world and, observation and interest once satiated, the future found reality in, and drew inspiration from, the completed image without return to nature. Egyptian sculpture stiffened into a formula from which it never was completely roused, although as the nation, pulling against the changing circumstances of time, in one age or another attempted to reëstablish the balance of her old combination, there are evidences of some attempts to reimbue the formula with life. Sometimes the images stirred, but they never pulsed with the full fire of Egypt's youth. The Old Empire, the early period which history defines, was the time of growth, of realization, of infinite possibility. Gods and Pharaoh emerged from the stone with a majesty and a reserve and a reality that impose on us, even today, a sense almost of the superhuman. It is beyond our scope to detail the technique of this art; the mastery of the material was astonishing in its precision; the mastery of the fact observed was convincing in its nobility or its humanity; the attainment of idealization was possible, but Egypt halted. This is the important point for us. Her power to observe facts carried her to the point where she could combine facts, eliminate the accidental and the personal, and create the ideal, but her imagination could not see the ideal and her purposes did not include it. The apparent stiffness and formalism in her statues is not suppression of all that might hinder the mind from grasping her deeper meaning, it is, rather, the lingering archaism of her craftsmanship. Egypt was satisfied with the practical results in sculpture before the images she wrought quite vied with the forms of life and, with the object she desired once attained, she left life and buried herself in formula.

The reasons for her point of view are apparent and illuminating; its result we shall find significant. Egypt did not create sculpture to express ideas, but, true to herself, to answer a definite need. Her statues made no appeal to her as art, in the way that we consider art; they solved a practical problem which, unanswered, might have shattered her whole conception of existence. Egypt, in her own mind, did not create images of gods and men, she created the actual gods and eternal bodies for herself. Her logic is very natural. Her imagination hesitated before the deification of nature, even in detail; her desire for the assurance of eternity shuddered at the evident frailty of the body in its most careful mummification. She wanted facts and results and, if she could bridge the gap with the practical imagination she possessed, she could bridge it also, and with less effort to her mind, in stone. Egyptian sculpture was religious and funerary where it did not drop to the craftsmanship which embellished the other needs of life. It went so far in its demand for imaged fact that it evolved gods who could be thought to move and speak, and rigid men who were calculated to survive the ages with their servants and their animals. It was most magnificent as it fixed the symbol of the Pharaoh—symbol as seen by us across the centuries, but stark necessity to the mind of the human king who posed as god, for on it hung the chances of his eternal kingship. Sculpture flowered in Egypt's youth, but lost the fertility that might have brought seed and reproduction. The flower was embalmed—mummified—was magnified and elaborated. There was no absolute copy; formula, indeed, demands less real observation than copy does, and Egypt's needs were met by formula. The result was, in its own phase, the result of all of Egypt,—enormous length of life, tenacity of motive, rigidity of expression that increased as time widened the gap between it and observation. Egypt carved what the mind of Egypt was capable of seeing.

Painting merged into sculpture and grew from it. Almost always it was associated with some work of the chisel, filling, with flat colors, masses of relief or of intaglio. It was, in no sense, the painting which pleases us today. It did not deal in pictures, could not have done so had the desire existed, for the technical restrictions which still imprisoned the living form within the image are more immediately evident in the drawing. Egypt never grasped the matter of perspective. She portrayed action and sinuous outline with amazing truth and grace, she realized the essential physical character of the subject. Her observation carried her to the facts she wanted, but not beyond these to any interpretative delineation. The motive in her painting was identical with the motive of her sculpture and of her life, and the production was so incorporated in the architecture that we must revisualize it in connection with the buildings. What is important now is the completeness and intricacy of its revelation. It had the power to enter the realm of detail, and of the combination of detail, which was denied the larger sculpture. It could show the Pharaoh in all his relations to his people and to his gods; it could depict his battles, his prisoners, his hunting, his family, his intimate recreation and his belongings. It permitted him to present his magnificence before his eternal masters and to carry it into eternity for his own enjoyment. It has made it possible for him to boast to us across the centuries and, since the Pharaoh assimilated Egypt, he depicted Egypt, her people and her animals, her labor and her pleasures, her mechanics and her constructions, her life and death, her physical spirit.

Egypt lives again for us in the brilliant tones that she assumed for her own eternity. In them we find many of the facts which permit us to reconstruct her life, for they fixed the images of facts which she considered the necessities of life. They suggest no qualities of the national mind that we have not already outlined, but they clarify these qualities and detail them. Egypt's whole preoccupation in her practical expression was in the statement of her position and in the preparation for her future. Her painting was but one means of this expression and was intimately connected with that other expressive instrument, her written language. Her hieroglyphics and her painting may have risen, in some connections, from a common source. Certainly, the symbols of the language were pictorial before thought and speech became so flexible that they demanded a flexibility of outlet comparable to our own. Much of the hieroglyphic writing retained this pictorial dignity so that it groups in masses among the paintings with such consistency that the eye finds unity in the combination, and the mind, which is trained to read, follows into the explanation the same ideas and facts of Egypt that are proclaimed by the forms and images. Egypt's whole expression was unified because the desires of her existence were unified. To name them in analyzing each expression is but to reiterate. Physical interests, fashioned for eternity, clung to through ages in a tenacious attempt to maintain a level rather than to rise to a higher one, and all expressed through the wealth of the simplest concentration, are at the bottom of every phase of expression which Egypt left.

The written fragments of her thought confirm the same conclusion. We find chronicles of happenings, boasting the might and glory of the Pharaoh and the nation; we find hymns of worship and of supplication which claim, perhaps, a physical humanity, but are very practical in the desires they reflect; we find vainglorious records of construction and treatises on medicine, and a practical-minded, early king is credited with a receipt to make the hair grow. We find incantations and natural magic. The one ever-present book in Egypt opened the doors of heaven and softened the entrance to eternity. A knowledge of its formulæ was more needful than the purest conscience, for they gave facts and produced results, or, at least, the Egyptians believed they did so, which was the important thing. The "Book of the Dead" gathered the desires and wisdom of Egypt's life into a compendium for the eternal doubles. Not only in her sculpture and her painting, but in this which we may call her literature, her mind reacts to us, not from the living which she loved so much, but from the preparations that she made for death.

And now, before we turn to analyze the buildings, we must ask one further question of Egypt from the rest of her expression. What was the attitude toward beauty; in what did beauty lie; what was its relation to the facts of life? The answer is inherent in the qualities we have already recognized, but its statement will clarify our understanding of Egypt's viewpoint toward her constructions, and must modify our judgment of them from our modern point of view. We cannot expect more than Egypt had to give. Her architecture stands on the first great level of accomplishment and we must consider it on its own plane to make it significant in the big development.

To Egypt, the achievement of beauty for itself was never an ideal. She would not have understood the statement that such a thing was possible. Beauty, to her, was a quality of form and color and cunning craftsmanship which made the surroundings of existence more pleasurable, the offerings to the gods more acceptable, the majesty of the Pharaoh more overpowering. It made eternity more dazzling in its promise. It was a means, an accompaniment to life, not part of life itself. Beauty did not consist in any intellectual fitness of form to purpose, did not arise from any creative power of the imagination or intellect at all. Beauty, to the Egyptian mind, was luxury, embellishment. This, on the surface, seems a drastic statement as we visualize the beauty, to us, of many of the statues, which make their appeal through the nobility of their simplicity. But we must remember that these statues were not carved with the idea of creating beauty, but of creating god and eternal man. The beauty that we see is largely the result of observation, imaging a real nobility of subject and reproducing it under the restrictions of craftsmanship that prevented triviality. The artist was working for the facts that would bring results, but it would be unfair if we did not grant him, in his early generations before he was conquered by his formula, an instinct for the great things, which has made at least his work eternal. The beauty the Egyptian sought as such covered the trappings of his life and death with design and image, with gold and jewel and ivory and precious wood; it is intricate and all-pervading, it throws a glamor and a glitter over all the moving life of Egypt that remains as real to us as it was to the Egyptian. It was almost never purposeless, for it carried the mind of Egypt to adorn the least important utensils of her life. It remains as telling in its revelation as the greatest sculpture and as the architecture, for it was evolved from the same qualities of practical imagination. The forms we see grotesque and purely fanciful, that seem to us drawn from some inner power to visualize ideas, cease to be so as we analyze them. The strangely pictured kings and men and women, even the gods, half animal, half human, and the monsters, came from the facts of life and nature as Egypt saw them. She observed, combined and formalized, but in a creative sense she did not imagine, and the beauty which she spread throughout existence was but another echo of her own spirit.

As we turn to consider stone and structure and form, it will increase our interest and the ease of comprehension to realize the degree of dignity which Egypt herself conferred upon her buildings. There is a clean line between the things of earth and things eternal, and Egypt was content that this should be so. It was on the gods and on the future that the nation lavished all her wealth and power and all her honor. The position of architect was always dignified, was often royal and was sometimes even claimed in person by the Pharaoh. It may have been a hollow honor depending for all fruition upon the masses, but the honor was very real to the mind of Egypt. There remain inscriptions from almost every period of her history to fix and detail the accomplishment of some great building, and one of them is worthy of transcription, for it gives us clues to Egyptian methods that we must consider later. In it the Pharaoh, Tothmes III, tells how he laid the corner stone, in his capital at Thebes, of the mighty temple for his divine ancestor, Amen, the god—the sun. The king speaks. "I went in to accompany my father Amen, . . . Pegs and cord were ready . . . then I came forward, yes I, to complete the business of the laying of the foundation stone . . . and the work of the first hammer for the laying of the foundation stone was to be performed . . . My heart was in joyful humor at that beautiful procession, to make a beginning of this memorial. Then was laid in the foundation stone a document with all the names of the great Gods of Thebes, the Gods and Goddesses . . . And all men rejoiced."[1]

If we also could picture this procession, we might gain a deeper feeling of the real glory that was in Egypt. We have analyzed her mind and actions with the pitiless calculation that a search for truth permitted. We have stripped her of much that our long inheritance has made us cherish, but, if we judge at all, we must not judge from the plane of our inheritance, but from that of Egypt's. She struggled forward from beginnings, and she went far. If nature and her innate powers had permitted her to go further, our own position might dwindle in comparison, for Egypt's accomplishment is nearer to our own than it was to the beginnings of Egypt's culture. It is but the first milestone on our pathway, but this first mile went deep into the possibilities of civilization, and, if we seem to restrict Egypt, in denying her the higher powers of imagination and philosophic intellect, we must not forget that these may be as dangerous as they are productive. Egypt lacked what some of us consider the best in life, but Egypt lived longer than any nation in the western world. She enjoyed life and was confident of her eternity. From a human standpoint, there is very much to envy.

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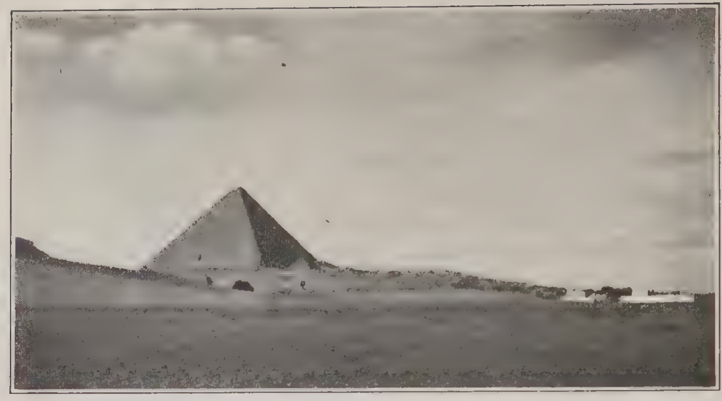
[1] Brugsch-Bey, *Egypt under The Pharaohs.*



CHAPTER III

EGYPTIAN ARCHITECTURE

THROUGHOUT her life, Egypt sought the immense in her expression, often relied upon mere weight of matter to force the future, and the structures she has left, looming on the threshold of history, are gigantic in their simplicity as none others that have ever been created. These are the pyramids, the tombs of the Pharaohs of the Old Empire, symbols of the Egyptian idea of eternity. There are more than a hundred of them along the Nile in the neighborhood of Memphis, but it is at Gizeh, opposite the ruins of the old capital, where stand the grandest of them all, the three stupendous erections of Cheops, Chephren and Mycerinus, of the Fifth Dynasty. Near by is the great Sphinx, Ra-Harmarkis, the Glory of the Rising Sun, a king's head with the body of a lion; immense, magnificent, in the semi-decay of the rock from which it is carved, gazing with its fixed stare across the sands that cover the mummy of old Egypt, as once it gazed on all the glory of the living ruler of the world.

Perhaps no creations of men have so much moved the imaginations of men as this huge image and the three pyramids beyond it. Their vast bulks seem the work of something more than human, and yet they were accomplished in an age that knew nothing of machinery as we understand the term. Year after year, decade after decade, thousands, perhaps hundreds of thousands, of naked laborers toiled, under the lash, up the artificial causeway from the river, dragging the stones and lifting them, somehow, into position and, dying, were replaced by thousands of others, without a thought for the cost in blood and pain, so that these symbols of the eternity of their masters might in themselves, from the dead-weight of their very masses, be eternal. And this idea, so fundamental in Egyptian life, is here embodied in the simplest form ever given to a great architectural conception, so simple that the manner of expression makes the symbol almost a fact of eternity, yet so stupendous in its realization that more than five thousand years have regarded it with awe, for, as an Arab chronicler wrote in the thirteenth century, "All things fear time but time fears the pyramids."

There seem to have been no fixed proportions. All of the pyramids varied in size, in the angles of their slopes, in the details of construction, but, since all were built from a single motive, they were composed of the same big elements; a square plan on which four more or less accurate equilateral triangles, facing north, east, south, and west, sloped to a single point. In most of them an internal mass of comparatively soft stone was covered with a casing of polished granite, possibly arranged in patterns of different colors. They showed no openings. After the mummy had been laid to rest in its sarcophagus, the last stones of the casing were put in place, hiding the entrance of the passage which led to the tomb chamber, so that blank walls were presented to the inquiring eyes of any vandal who might wish to despoil the king's immortal double of its hidden treasures, of its very life. Mere figures give little impression of the enormity of the reality. The largest pyramid of all, that of Cheops, is almost five hundred feet high and contains many stones weighing in the neighborhood of thirty tons and thousands which are but little smaller. It is a great geometric mountain, impressing the beholder, not with a realization of beauty, but with an overpowering feeling of the simple grandeur of colossal size. We cannot apply here the tests which we have defined as guides for architectural judgment. There can be no question of the appropriateness of forms where all form is reduced to one single fact; there can no more be argument whether this form is primary or secondary than if it were in reality the mountain it resembles. What it was erected to express, it expresses completely; the purpose it was destined to fulfill, it would still continue to fulfill but for the perversity of man who created it.

For we must keep in mind that to the Pharaoh who drove his subjects to pile this great symbol on the earth, it was very much more than a symbol. It was the fortress and hiding place of his double. In its impregnability lay his hope of eternal life. It was not the expression of an idea that he desired, but a practical result, and this result would have been obtained had it not happened that, as time went on, men feared the spirit of the dead king less than they coveted the riches of his everlasting home. There was, certainly, to the ancient Egyptian, little of that romantic quality with which we, whose ideas have grown through centuries of other influences, look back upon these immense creations. His idea of immortality had none of the spiritual illumination which has been the gift of Christianity, his imagination did not rise above his physical desires and yet, in these pyramids, at the beginning of his greatness, before formula had halted growth, in his efficiency to handle facts that assured results, he produced a supreme symbol which can still proclaim all that time has evolved, all that stone form can be made to say of the conception of an endless life.

The Old Empire wore out its vitality. Thebes, more deeply hemmed in by Egypt's nature, became the capital. Gods altered in their importance, new Pharaohs regripped the slackened concentration, but the life of Egypt settled more firmly to its formula. The pyramids dwindled in size, then ceased to be erected. The efficiency of Egypt had found a surer way to the result she wanted. Instead of rearing artificial hills with infinite labor, she hollowed passages and chambers from the mountain walls that closed in toward her new center, burrowed deep, to secrete her immortality with her mummied dead, in the still more imperishable fastnesses which nature had provided. Strictly speaking, these engineering feats of excavation were not constructive building. Human eternity was settled, its formula was fixed, and the nation turned her creative architectural powers to publishing the glory of the gods and erecting for them everlasting dwellings on the earth. At this point in the development, where the architecture passed in its great significance from tomb to temple, it assumed forms more tenacious and more detailed in their revelation of the mind of Egypt even than the pyramids and, in so doing, it left all intellectual idealization to fix itself in the formula of the nation. An analysis of these forms is a statement of her indirect expression; their growth shows the immense possibility in her beginnings and their inevitable bias from her preconceptions.

The Egypt we have pictured wanted facts to produce results. All the permanent phases of her expression combined to make a complete image of her life for the benefit of eternity. Sculpture and painting produced the gods and the eternal doubles with all that they demanded. The architecture furnished their surroundings. All three were necessary, all slightly different in their promise, in their direct expression, but the indirect expression of them all remained identical. As it reacted on the architecture, it not only fixed the forms that became significant through the Egyptian ages, but it fixed the big direction of development in relation to the ideal possibilities of architectural growth. The direct expression of any nation is easily cast aside by the later builders, but the indirect so weaves itself into the attitude toward structure that it must aid or restrict that structural evolution as it in turn becomes inheritance.

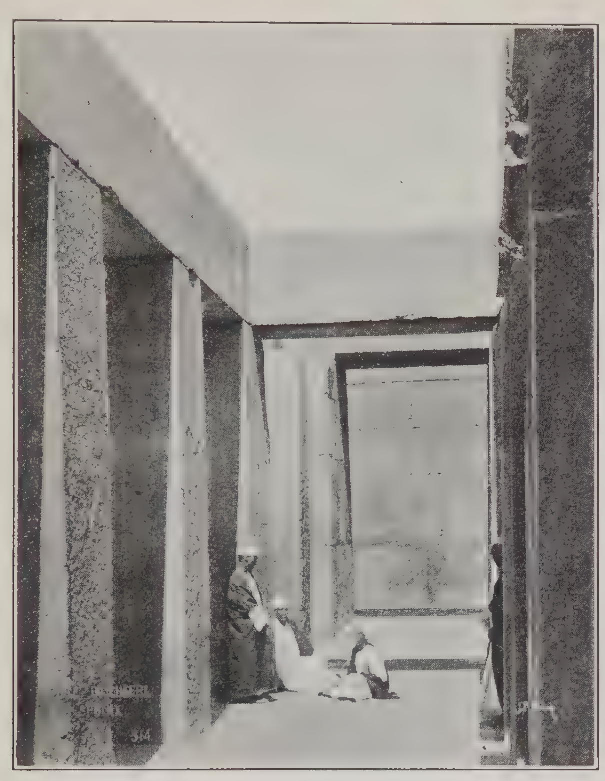
Egypt had no inheritance we can trace except her own. Her development was simple, not complicated by foreign importations, and her constructive system was so primitive that it was but one step removed from the solid mass construction of the pyramids. It was a scheme of dead weights resting on vertical supports; of columns carrying lintels which in turn directly upheld the roof. The rainless climate made a flat roof possible and the number and size of the stones which formed it regulated the number and spacing of the vertical supports, and, since all the blocks above the columns were horizontal, all pressure on columns and on walls was vertical. If the proportions were heavy enough and properly balanced, there was no latent cause for disruption. It all depended on proportion; not quite that visual quality which we defined as fundamental to the possibility of beauty, but a physical proportion of support and weight that is even more fundamental if the fabric is to endure and which must be the foundation of the visual quality as well.

The Egyptian did not develop the mathematical precision of interrelation which was insisted on in some of the later styles. He was content to be sure of strength and in his desire for strength, lacking the power to search precise adjustments, he continually made the parts of his construction heavier than his need. In doing so he saved himself, in the long development, that exaggerated attenuation of proportion that has come with the decline of more articulated styles. Constructively, Egyptian architecture did not grow or change. The civilization from which it rose stood so long alone in the world that, with each new impulse toward production, it turned to its old creations to build upon their example, and the forms in the later work remained comparatively heavy. Yet Egypt, building from nothing, went very far. In her surveying she discovered the beginning of a practical geometry and applied it to her construction. She understood the properties of the right angle and of that right triangle whose sides measure three and four units and whose hypotenuse is five units, by which a right angle may be established on the ground. A cord, divided into twelve equal parts and with its ends tied together making a single loop, was stretched in the form of a triangle and fastened to the earth with pegs, one at the knot, one at the end of the third unit and one at the end of the seventh. The desired right angle was formed automatically and walls could be easily placed perpendicular to each other. This operation, almost a sacred function called the "cording of the temple," was mentioned in that inscription of Tothmes III, where he laid that very early foundation stone in so modern a manner. It was not beneath the dignity of the king-god to use what in our own day would be the simplest formula in the hands of any carpenter, but the fact that the formula existed marks a great advance to the credit of the practically efficient Egypt.

Such knowledge probably remained among the priests and the chosen few under whose care the buildings were constructed and their simple secrets may have given the control which dignified their work among the laboring masses, for, in spite of the wonder which the buildings have always caused, there seem to have been no engineering devices which have been forgotten. The efficiency of Egypt was in a combination of the elementary mechanical principles she had discovered with an unlimited and arbitrary command of labor. In the concentration and assimilation of the nation by the Pharaoh, lay his power to fix the symbols—the facts rather—of his devotion and his magnificence in unexampled masses of masonry.

The expression in the skeleton of the structure is obvious from the facts and desires of Egypt's life. That she remained satisfied with the simple logic of her system was as much the result of her mental attitude as of the tenacity of her primitive efficiency. She demanded permanence and stability, or her purpose failed of its fruition, and these things, her experience must have taught her, were wrought only from a certain fundamental logic. But once these were assured the logic ceased wherever there was conflict with the desire for further expression. The big facts of the structure were necessary as facts, but the forms which Egypt gave them must discount any belief that Egypt considered their logic æsthetically preferable. This is not a negative deduction, drawn from the analysis of a consistent development of forms, but a positive one, clear from the evident balancing of two types which were evolved and the discarding of that one which had the greater architectural promise but less national significance. Egypt's conception of her most significant structural form, the column, epitomizes her entire architectural attitude, echoes her life.

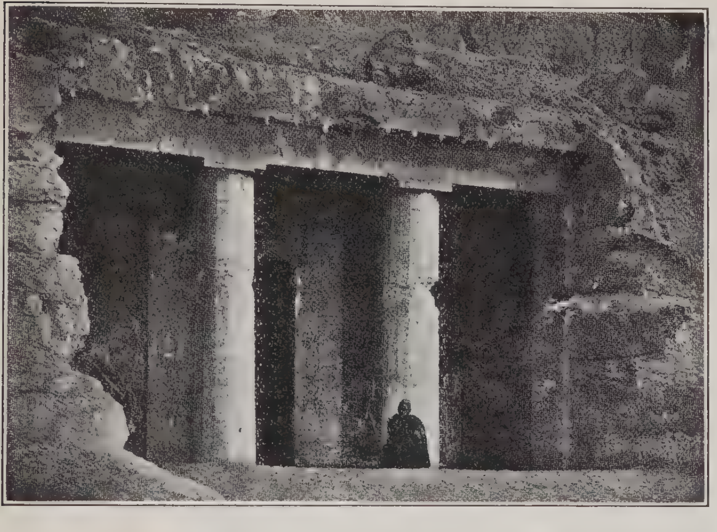
A COLUMN, no matter what its material may be, is a form of support. In its essense it is a single supporting force, but there has been almost always recognized, in its complication, the threefold function of base, shaft and crown. The base, ornate or simple, must form a firm rest, embedded in the foundation, so that the weight from above cannot push it out of place; the shaft must be of such proportions that it will not buckle under what it carries and should indicate in its lines that upward thrust which is the essential work of the whole composition; and the capital, spreading out to create a strong landing for the superstructure, must also in its form make clear to the eye the transition from the vertical push to the weight of the thing supported, must bind together the lines of the shaft and, by some horizontal factors in its arrangement, show that the thrust is ending. It is, both optically and physically, one of the most significant of architectural forms.



THE TEMPLE OF THE SPHINX

All the completed combinations have had long evolutions. Significant form implies growth rather than invention, and the ruins of Egypt's buildings give us clues to the progressive steps in a development such as no other remains can show. Beyond the paws of the huge Sphinx at Gizeh there is a very ancient building, probably a temple, which has rectangular supports and lintels of red granite, without moulding or adornment beyond the innate beauty of the materials and the remarkable precision and finish of its workmanship. It is the actual embodiment of the example used in the first chapter to describe the possible beginning of the stone column. The temple of the Sphinx is the simple skeleton of the Egyptian structural system. It is the fact in its baldest statement, before form in any conceptual sense had become allied to it.

The second step is evident in the columns which seem to uphold the entrances to the funeral galleries which superseded the pyramids. Here the rectangular corners have been cut away. Some of the shafts have eight, others even sixteen sides and, in some, the diameters diminish slightly toward the top, where the cutting stops against a square plinth, creating a sort of capital below the lintel whose upper edge has a simple crowning moulding. There is here, already, in this complication, the beginning of a fundamental architectural development, of shaft, capital and entablature, which might have resulted in the intellectual fitness of form to usage, which might have carried the form toward the ideal of functional expression. Later, it was through exactly some such steps that the Greeks produced, in the Doric order, the most wonderfully adapted stone columns that have ever been designed and this growth in Egypt has often been conjectured to have presented the actual models for the Greeks. The likelihood of any real connection is problematic, but, considering the fundamental similarity, these Egyptian shafts have been named "Proto-Doric" and, whether there was any real historical relation or not, this series of logically developing members, forming stages in the perfection of definite structural expression, is a most enlightening illustration of what architectural growth may mean.



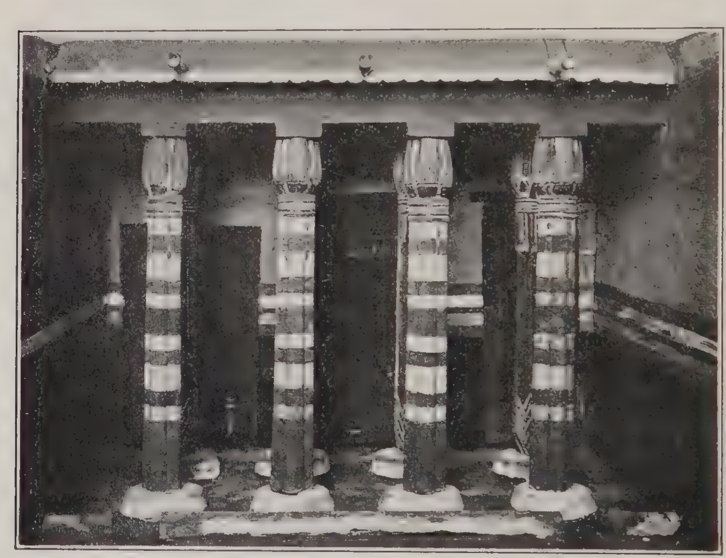
ENTRANCE TO A ROCK-CUT TOMB

Egypt created but did not see the latent possibility, could not, from her point of view, have done so. The intellectual beauty expressed in fitness of form to usage brought no result that she desired. The development we have pictured had meant to her but the meeting of practical needs, which, met, had confirmed her craftsmanship and left her free to turn to the forms which expressed her life. These columns grew in an early period, were never used in the later great constructions, and, as Egypt settled into formula, ceased to be used at all. The formula Egypt found was in the nature which surrounded and dominated her existence. With her slow imagination, it was inevitable that this should be so. The reaction again was mental as much as it was the tenacious survival of physical form. The statues and the paintings provided the facts of divinity and of eternity; the buildings, as we have said, were the surroundings. The surroundings of life were evident in nature and, although Egypt had made a clean break in architectural permanence between earth and eternity, eternity was conceived in terms of earth and the forms of its environment were transcriptions into stone from the more perishable earthly structures. Egypt's practical imagination failed to see the intellectual and when she threw aside the possibilities in the forms that had grown from the simple blocks in the temple of the Sphinx, she arbitrarily carved the intellectual out of the column and wrought it into natural forms. Almost every shape she loved was secondary in its origins and is traceable to its source. It is probable that the prototypes from which the stone forms were drawn lived on beside them, for while the temples were built of the most enduring materials, of granite, of sandstone and limestone, with the softer alabaster for interior facing, the homes of the people, the nobles, and even the palaces of the Pharaohs were constructed in a far less permanent way of wood and brick and almost all traces of them have disappeared. Wall-paintings remain, however, from which, in their perspectiveless distortion, we can discover much of the detail and arrangement and see the actual wooden columns with their characteristic decoration. And we must remember, as we analyze the stone forms, Egypt's evident satisfaction in them. Had they not expressed just what Egypt wanted to express, had they not, however they may appear in the light of modern criticism, seemed to her the last word in beauty and in fitness, much of their evident incongruity would gradually have been shorn away. From the manner of their generation and from Egypt's preconceptions these columns stopped in their development before, as structural factors, they reached perfection, although in most of them the big elements are present.

The bases are uniformly simple, usually rounding upwards toward those surfaces from which the shafts spring. The shafts are often recollections in stone of bundles of papyrus bound together, or else of papyrus fastened, in a more decorative way, around a central pole. They are really groups of minor columns set into some hypothetical inner core, which, of course, has no separate structural existence. They bulge out above the base, like vegetation springing from the earth, and the lower parts are often decorated with pointed leaf-forms, accentuating the suggestion of their origin. In the later ages of the development, these grouped shafts were smoothed out to a more cylindrical surface to give increased space for the all-pervading decoration, but they never lost their characteristic outlines.

There is a great variety among the capitals which may be simplified for discussion into four groups, the bud, the flower, the bell-shaped and the Hathor-headed. In the first two groups there are real beginnings of structural fitness, but in the others no such suggestion. The latter state Egyptian facts in forms that appealed to Egypt, even ape the province of the sculpture, but they are so illogical as structure that they have no architectural significance. The bud-shaped caps, recollections probably of real lotus buds which decorated the wooden poles, are high compared with the shaft below them, whose general curves they repeat with a more pronounced emphasis, swelling strongly above the ribbon band that gives the first idea of the horizontal, and then stiffening into a straighter line as they diminish toward the top. The ribbon, with hanging ends, ties together the vertical springing lines of the column, but it does not stop them, for all the minor members of the shaft are carried under and beyond it and complicated in the more generous curves of the capital.

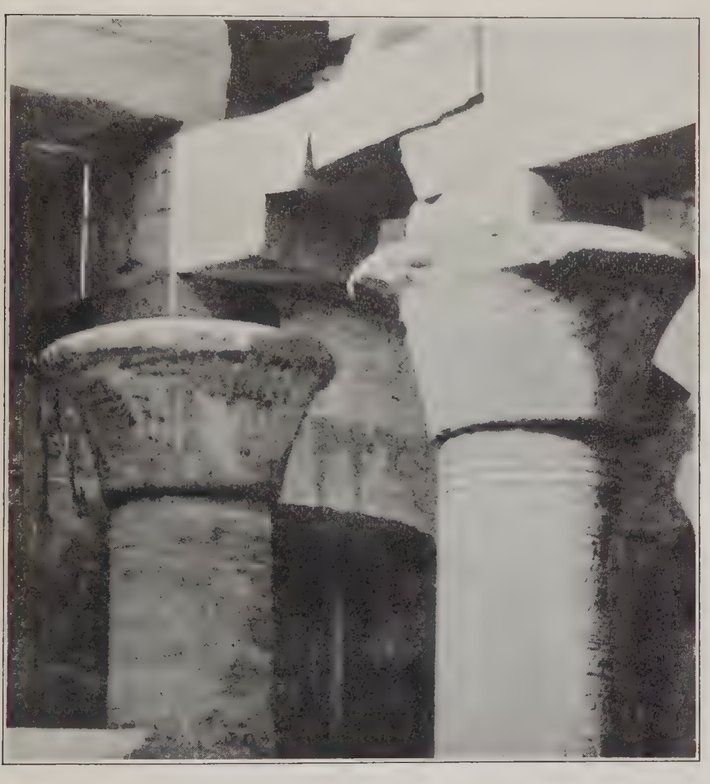
The whole form is splendid in its expression of vigor and upward push and it is sufficiently modified by horizontal touches to indicate the end of the vertical, but the fact that these great rigid buds diminish, rather than spread, at the top where the superstructure must rest, makes them less completely satisfactory than the flower-shaped capitals which, in spite of their very different outline, seem to have had the same heredity. These are proportionally not so high as the bud forms, swell gently above the ribbon necking, straighten a little and then flare outward in more or less the shape of a full-blown lotus flower, or of flat-topped clusters of palm leaves, forming beautiful and fitting crowning mouldings. They do not contradict the upward thrust of the column, they suggest more strongly than the buds that the thrust is ending and, as they spread, they create more adequate platforms on which the lintels



COLUMNS WITH BUD-SHAPED CAPITALS

may rest. In them, we must suspect, the model was, by a happy chance, appropriate to the function.

These are the most architecturally expressive capitals which the Egyptians developed, with their beautiful curves and their strong landing surfaces, only—and this is one of the generally illogical features of the Egyptian columns—the lintels do not directly rest on them at all, but on cubical blocks smaller in their dimensions than the tops of the capitals and as architectural members alto-



FLOWER-SHAPED CAPITALS

gether inexplicable. It seems that all the value that might be had from the proper design of a column was here arbitrarily thrown away and with no advantage to any part of the scheme of the building. We can explain these blocks perhaps as the survivals of the heads of those early wooden poles around which the fagots of papyrus and their flower decorations were bound; as examples of how tradition, when forms are transcribed from one material to another, may cling to features absolutely meaningless in the new medium unless the whole evolution is constantly regulated by a more searching logic than Egypt possessed.

The lintels are topped by simple compositions of crowning mouldings, fixed in form throughout Egyptian architecture. Where form did not indicate facts or bring results, Egypt wasted little ingenuity in variation. Here a rounded moulding of separation, whose outline approximates a semicircle, edges the top of the lintel-block and, above this, the actual crown curves outward in a shape not essentially different from that of the quarter circle we have already used in our elementary examples, except that its height is greater than its overhang. Its edge is thickened by a flat band. This group comprises almost the entire range of Egyptian mouldings; there are but few other forms that can be classed as such.

With the exaggerated desire for stability, the constant tendency was to crowd the supports and pile enormous blocks upon them and the result upon the mind of the beholder is exactly what the Egyptians sought, an impression of great endurance, of gigantic strength, of supreme majesty. And yet there is, in all their combination, that lack of proportional relation which has been stated as characteristic of Egyptian architecture. Beyond the first demand for safety in the structure, there is no fixed ratio between the diameter and the height of a shaft, between shaft and capital, between capital and lintel. There is no unity of use among the types of form, no grouping into definite combinations which might be regulated by the demands of use. Safety assured, the desire was for environment and the stone vegetation for eternity rises stiffly, but with much the same luxuriance as nature. Lotus and palm are mingled in surprising variety with the heads and images of gods.

It is easy for us to see in these warped structural features, in their dependence on the papyrus and the lotus and the palm, a conscious symbolism of the life for which the Nile was responsible, a spiritual recognition of the river to which Egypt owed so much of her existence. Egypt herself, probably, did not feel this. It was not in her nature consciously to become symbolic. She wanted facts and results and in her architecture she built on facts, as she saw them, to produce results. So truly did many phases of her civilization develop from the Nile, that her early light constructions were largely built and strengthened and decorated from its mud and from the growth along its banks. It was only the stone copies of these constructions that later developed into the possibility of symbols and that we see as such through the perspective of the centuries. And symbols certainly the columns are, more perfectly than they are accurate structural instruments; unconscious symbols of the mind of Egypt. From the point of view of history, they are as expressive as architectural forms can be and they are purely indirect expression. All the spirit and the power and the contradictions of the nation are in them. The quality of her imagination wrought them; her lack of depth to experiment in an intellectual way permitted their repetition and sanctioned the formula that grew from them. If we make the demand that every detail in their composition shall be trained down to show forth accurately some structural usefulness, then we shall find often that they fail. And yet as we balance the points of failure against the underlying truth in expressing the big principles of the system in which they play their part evidently as supporting members, play it with an exactness in their portrayal of national character and, moreover, with an impressiveness that has never been surpassed, we must acknowledge that these Egyptian columns are worthy of real admiration.

They were never mere cold masses of stones, untouched except by the hands of the masons. They took the place of canvas to the Egyptian painters and carried the expression to the utmost intricacy of detail. Shafts and capitals glowed with brilliant color and as the columns that resembled bundles of poles were smoothed to cylindrical form, the naturalism of the color gave way before that multitude of figures, those masses of hieroglyphics from which we have gained so much of our knowledge of Egypt and her history. The indirect expression, in its demand for purpose, here often becomes direct in its revelation of the actual Egypt. Not only the columns, but every

SCULPTURED DECORATION OF WALL

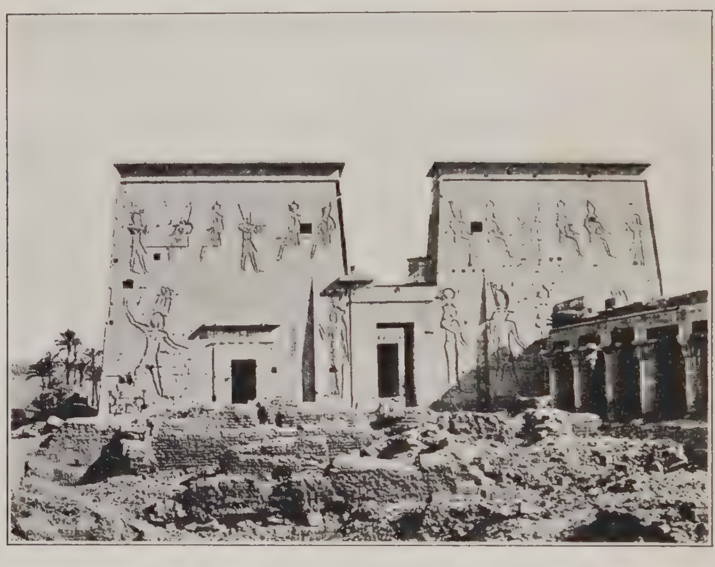
available space throughout the buildings was covered with continuous lines of the images of gods and of Pharaohs, of man in every attitude and vocation, side by side with fishes, birds and animals. They were sometimes raised on the stone surface in flat bas-reliefs, sometimes incised as intaglios so that they did not project beyond the general level of the wall, or again outlined on the thin coating of plaster that covered the stone when the jointing was too conspicuous. Always they were filled in with brilliant, conventional tones, softening the effect of the continuous and glaring sunlight by their gorgeous tapestry of color. Indeed, in that climate, under that sun, some such color was necessary almost for visibility, but these arrangements of the Egyptians, rich as they are and enlightening from all they have to tell, were not conceived from an architectural point of view. It was again the demand for facts without the intellectual appreciation of æsthetic fitness to some architectural use. Neither the forms themselves nor their composition had any vital relation to the structural masses which they covered. In no way were they made to emphasize the salient features of a building and, where they might have been of the utmost use in making increasingly clear the purpose of the whole, the most that can be said for them is that, with their all-pervading film of line and color, they do not hide it. And, even considered apart from the architecture, they are not altogether satisfactory. They are too uniform, too continuous for the eye to take in, for the brain to grasp their endless suggestion. There are no separations into pictures, no plain surfaces for relief. While there is much beauty of shape and line and color, of individual conception, there is also much conventionality, which to the architecture of course is of advantage, regulating the repetitions into more of a design than would have been possible without it. It is one of the most characteristic expressions that Egypt has left us. To her it had a purpose, but from the broader view of architecture in its big development, we must consider it as decoration and, as decoration, it shows us clearly, as do others of the creations which she cherished, that in the riot of her self-revelation, Egypt was forgetful or ignorant of some of those restricting laws which might raise this expression into the most perfect art.

There are few remains of temples from before the second Theban or New Empire, because Egypt, in her demand for continuity, as the older buildings fell into disrepair, rebuilt them on the same sites, on grander scales and with greater magnificence. There is, however, bordering the Nile, a series of splendid ruins, colossal and surprisingly complete skeletons of the eternal glory the Egyptians thought due their gods, buildings dating, some of them, from early in the New Empire—approximately 1700 B.C.—and from the following periods even to the Greek and Roman occupation. The variety among them is astonishing considering Egypt, but they were the result of formula and none of them contradicts the essential quality of the nation. We can trace in them the superficial changes which the demands of the succeeding periods produced and realize the individualizing tendencies of differing localities, yet the same motive, the same underlying requirements, the same simple constructional scheme can always be distinguished in spite of the fact that many of them were gradual growths under the hands of several of the Pharaohs.

The aversion to change and the conception of the loose-knit plan made this last possible. These temples are series of halls and chambers and courts, generally balanced along more or less straight axes and possible of indefinite extension. Most of their architectural coördination is in the interiors, in the arrangement of the individual elements whose details have no necessary relation to those that preceded or those that followed and which in their actual construction may have been separated from each other by long lapses of time. Had these buildings been thought of, originally, as complete units, as groups of definitely interdependent parts, controlled by some mathematical scheme of proportions and so been built, under a single impulse, the resulting exteriors might have become much more significant architecturally. As it is, the somewhat casual character of the plans is immediately evident. The temples sprawl massively over large areas and their real height is negatived by the strong horizontal impression produced by their great length and the flatness of their roofs, creating in a smaller way the same feeling of solid and everlasting horizontality which the level tops of the mountains give to the land of Egypt. Indeed, the large facts of the nature are as strongly in the buildings as are the details. Thick and high brick walls surround the sacred precincts,

PHILÆ

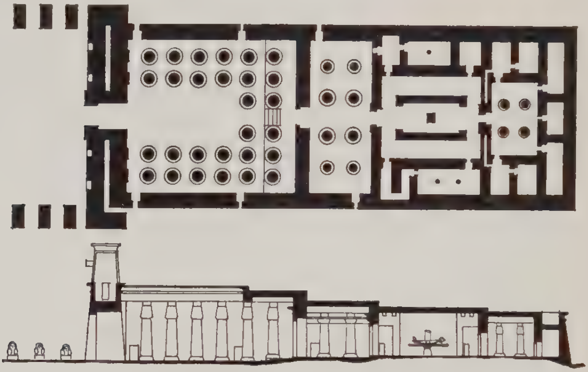
increasing the levelness of impression and enclosing tracts of land where were, in the old days, sacred lakes and groves and gardens. The upward push of the many columns is hidden within the general mass and only one feature of these compositions soars at all from the dead level of the horizontal, the pylon, the monumental guardian of the gateway.



PYLONS OF THE TEMPLE AT PHILÆ

Pylons always stand in pairs with the great doors between them and projecting somewhat in front of them, showing that the combination was considered an honor to the god above whose portal it towered and not an element of defense, and it is inconceivable that defense was needed, that Egypt should turn against the gods she had created, and who in turn had moulded the life she led. Pylons are huge masses of masonry, almost rivaling the smaller pyramids in their bulk and resembling them somewhat in shape, for although their plans are oblong instead of square, their sides slope inward as do those of the pyramids. The angle is much less rapid, however, and their aspiration to soar is decidedly checked. The sides are not continued to the sharp ridge which they might have formed, but are cut off by a flat roof and finished at their tops by the same crowning mouldings we have already described above the lintels. Like the mind of completed Egypt, they halted before their final possibilities. The inclined edges are seemingly bound together by a rounded moulding resembling that at the bottom of the crowning group and meeting it, the echo of original strengthening reeds which held the corners of some ancestral mass of unburnt bricks or mud.

A temple may have several of these pyloned gateways along its axis, showing the points at which one Pharaoh or another considered he had finished the great conglomeration of buildings. They mark the successive stages of its growth and help the eye a little to realize the order under its complication. A certain order always does exist, if only that of a series of units along a straight line, but this is increased in its significance by the successive functions of the different halls and courts. There is a real type, a complete direct expression, hidden under the changing externals which met the demands of the formulated worship the temples housed. An avenue lined with sphinxes, in many cases, led to the doorway flanked by its doubled pylons, in front of which obelisks pointed into the air; against which colossal statues of gods or kings loomed, beneficent or terrible; and into the walls of which were set tall flagpoles flaunting brilliant streamers. The high rectangular opening between these pylons led to an inner court, surrounded on three sides often by colonnades backed at either hand by solid walls. More huge figures dominated the enclosure, filling it with the strangeness of their personalities as they stared stiffly straight ahead over the altar in the center. Through the openings between the supports at the rear, passing up inclined planes or steps to a higher level, the worshiper entered an immense hall thickly set with ponderous shafts whose capitals were almost lost to sight above him. This was the hall of columns, the hypostyle hall, to use the Greek name which has become fixed to it. The majesty of this place was oppressive with its crowding and towering supports, where a central aisle, with higher roof, made possible the screened windows which let in the only light and where a myriad painted kings and gods peopled every surface, glowing through the mysterious gloom and filling the beholder with the dread of the great being toward whose shrine he was approaching, as well as of the king who alone might serve the deity face to face. Beyond the hypostyle hall the people might not pass. Only those given divine grace and those properly initiated could enter the further chambers and only the Pharaoh, or perhaps the high priest, could penetrate the sanctuary itself. This may have been placed directly behind the hall of columns, but was frequently surrounded by other rooms, treasuries for



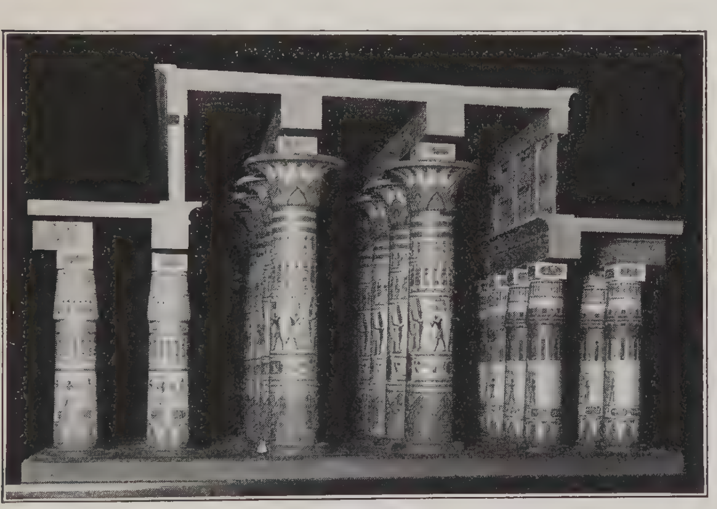
PLAN AND SECTION OF A TYPICAL TEMPLE

the god and chambers for the priests, all the necessary functions of the complicated worship. As one progressed from the entrance toward the sanctuary, the light gradually diminished, the floors grew higher, the ceilings lower; the mystery, the terror increased, until at the end of the long axis, hidden behind a rich tabernacle, enclosed by the weighty and windowless walls of the holy of holies, the statue of the god—the god himself—was almost as inviolable as the double of the Pharaoh within its hollowed chamber in the mountainside. The temple epitomized the focused life of Egypt.

The principal elements, the ornamental approach, the pylons at the portal, the forecourt, the hypostyle hall and the sanctuary were all usually present with greater or less distinctness in the makeup of a temple. The amount of elaboration which each received depended upon the individual circumstances and probably to some extent upon the taste of the builder, certainly upon his resources. The practical latitude in the application of the formula is evident and it was at the great national shrines, where all the riches of the Pharaoh might be drawn upon, that occurred the most complication, the continual enrichment and multiplying of courts and halls, each king vying with his ancestors in the lavishness of his additions. Perhaps the most gorgeous work of all dates from the time of Rameses II—about 1350 B.C.—although it is not always so finished and solid in its accomplishment as some of that which preceded it. There grew to be less care in the foundations and in the stone-jointing, and the massive bulk was often contradicted by an increasing pettiness of the individual blocks. Formula bred contempt almost of the very stability which was its first desire. Yet it was Rameses who built much of the most astonishing constructions whose ruins still stand at Thebes and also the fine tomb chapel, the so-called Ramesseum, not far distant, and he, also, who had the gigantic temple cut from the mountain walls where they nearly overhang the Nile at Ipsamboul toward the south.

Both of these latter monuments represent types differing from the temple, but closely resembling it in their architectural features. The tomb chapels, temples in motive and in all except the presence of a sanctuary, were built near the secret passages which were to hide the royal mummies. They were more consistent than many temples from the single impulse, in each case, back of their erection. They published the glory of the Pharaohs and provided all those things that might be useful to the doubles, and yet from the images which were present the actual gods seem to have been as much at home within them as were the deified doubles themselves. The temples cut in the rock contained the essentials of the constructed ones, but so modified that they might be excavated, for in that part of the valley where they occur the mountains so close in upon the river that there is little level space. The great façade for which Rameses was responsible is interesting in showing a certain, but not complete, grasp of the fundamental differences between carving and real construction. Here the architectural features which are retained are of less importance than the four magnificently colossal seated figures of the king, two on each side of the doorway, gazing eternally across the river.

It would be valuable if we could study these types in all the variety of their detail, but our space will not permit; more valuable even, if we could look more closely at the greater among the temples themselves, at the titanic structures of Luxor and Medinet-Abou, or the wonderfully graceful pavilions on the island of Elephantine. Of these we can select only one for a somewhat more detailed analysis, the temple of Amen-Ra, the sun, at Karnak among the ruins of Thebes, for this stood at the very center of Egypt's experience and shows, on their grandest scale, the elements we have enumerated. Here the accretions of generations form what is said to be the vastest mass of ruins on the earth, a stupendous relic of the producing power of Egypt. The avenue of sphinxes which leads to it is well over a mile long and is seventy feet wide. There are five hundred figures on each side, their pedestals only thirteen feet apart. The first pylons measure three hundred and seventy-six feet across the front, are one hundred and forty-six feet high and fifty feet deep. They lead into a great court, at the right and left of which two smaller temples open from the colonnades. Down the center of this court, through an avenue of columns, one reaches the second pylon and through it the hypostyle hall of Rameses II, the largest of its kind, stretching three hundred and forty feet in one direction and one hundred and seventy in the other. It contains one hundred and thirty-four columns, the twelve largest with spreading flower-shaped caps, towering seventy-six feet on either side of the central aisle. These columns have diameters of al-



RESTORATION OF THE HYPOSTYLE HALL OF RAMESES II most twelve feet and are more than thirty-three feet in circumference. The other hundred and twenty-two columns, with bud-shaped capitals, are but little smaller and lower. Behind the sanctuary, which is enclosed in a maze of inner chambers and surrounded by a double wall, is another columnar hall, smaller and earlier, but very beautiful in its more restrained expression. The precinct of this temple includes eleven separate shrines, extends one thousand five hundred and sixty yards on its longest axis, from east to west, and is six hundred and twenty yards at its widest point.

These figures, perhaps, give little aid to our minds in reconstructing the image of so vast a group of buildings and we must remember, always, that mere size alone cannot enhance the value of an architectural production. When, however, there are present elements of real greatness, particularly such as from their conception depend largely on their general shapes for their effect, then the colossal size which Egypt was prone to employ must of necessity increase the grandeur of the result. The impression given by these enormous crowded ruins is almost as overpowering as that of the pyramids and, in its way, as much the result of the masses of stone which tower up on all sides. When one stands in their midst, surrounded by the giant blocks, encompassed by the continuous imagery, some of the spirit of old Egypt must seep into his consciousness. One must begin to sense, in spite of the centuries of different thoughts which lie between, a little of what the ancient Egyptian felt as he passed through these symbol-crowded courts and entered the awesome gloom of the hall of columns, with the conviction that beyond stood the living person of the great god whom he worshiped. To him it was not the fascination of the ruin of past ages, or the mystery of a dead belief, or a great problem in architecture, partially succeeding, partially failing in its solution and yet telling those things which it wished to tell more astonishingly than any other solution could have told them. To him it was a fact wrought from the very foundation of his race, which in honoring his gods was fulfilling a great requirement for the happy continuation of his own existence on earth and throughout eternity. We need not wonder then, if sometimes the subject matter of his architecture blinded him to what we moderns might consider the most perfect manner of its expression.

Both the matter and the manner of Egyptian architecture are traceable to nature. The forms that the Egyptians loved, in which they found significance and beauty, from which they created their formula which persisted, were natural forms. On the surface, Egypt is a surprisingly clear example of the theory of æsthetics which claims that all conceptions are drawn from nature, but the evidence of Egypt is not conclusive. She was at the first great stage in a development which is continuing beyond ourselves and, if the theory is fundamentally sound, it is to be expected that her forms should be close to their originals, should depend almost directly on observation. This is true throughout the forms which she preferred and which she maintained, but it is not so clear in those other forms whose development she began but did not complete. We are considering architecture, which from its essential duality of purpose we are justified in separating from the other arts, and the theory in question admits that architecture may be the most abstract in regard to nature of all expression that makes use of form. We liken the pyramids to artificial mountains, but as mountains they are so abstract and so different from those presented to the Egyptian observation, that we must admit the possibility that the conception "mountain" is read into them by us and is not inherent. The germ-columns and the lintels in the temple of the Sphinx are even more suggestive in this direction. They produce no idea beyond that of architectural usage, seem rather the first discovery in an absolute abstraction and yet they were beginnings that should have been near the fountain-head of natural form. The pyramids and these early columns are pure geometry, elementary and simple in an obvious way which is seldom present in surrounding nature. We are not ready to draw conclusions, must be content to gather evidence, but for our practical purpose it seems, even from the accomplishment of Egypt, that architecture, as it approaches intellectual expression of fitness, definitely turns away from natural form, whatever may have been its remote conceptions. All we can claim for Egypt is that her preference, her idea of necessity, was founded in her surroundings and that what at first seems proof toward a general conclusion, is but the indirect expression of a single nation moulding and restricting her reaction on the big development of architecture.

To what extent does this accomplishment measure up to the standards outlined in the fundamentals? How great was the success of Egypt, or how complete her failure? Bearing in mind the qualities which made her Egypt, it will be useful to sum up her architectural facts and clarify her achievement. We are impressed at once, as in all her life, with the singleness of her age-old development, growing from its own seeds and maintaining with the utmost tenacity its fundamental characteristics, evolving, to a certain degree, a group of primary stone forms and yet in the end lacking the intellectual vision to see their promise and preferring to them secondary forms, which, without the possibility of as perfect expression, were more calculated to show forth the national qualities of mind. We find a splendid adaptation to the climate in the flat roofs, as well as in the few openings and the brilliant color which together subdue the fierce sunlight; and to the geology in the use of great slabs of stone from the supplies at hand, causing naturally a construction of columns and lintels, instead of arches or other forms which are equally the expressive shapes of more insignificant materials. We find the conception of this system admirable in its simple logic where the neglect of logic meant the collapse of fact, but failing in many of its details where there was conflict with traditional ideas, producing forms, symbolic not as we have used the term to show forth some part of the structural scheme, but in expressing things altogether unarchitectural that the Egyptians wished to say, things that to them were facts promising results for life or for eternity. We find the mouldings properly functional, but meager and unimaginative, and the forms in general, so far as they go, used without the structural contradictions of styles accepting more readily the ideas of alien nations. We find every surface covered with a scheme of decoration, carved and colored, which is well suited to the practical requirements of light and magnificently expressive of the life of Egypt, but which is not architecturally organized in itself, nor helpful to the constructive skeleton beneath it. We find plans perfectly adapted to their needs, but so loosely knit that there is no real finish to their composition, and elevations making these plans sufficiently clear to the eye, and we find, throughout plan and elevation and detail, the lack of an underlying mathematical system of proportion which, had it existed, might, by its logical application alone, have woven into the general development a successive refinement and an increased functional beauty which does not exist. It is but reiteration to say that Egypt had not the intellectual curiosity to go beyond her facts. She carried her structural evolution just so far and then, before it became in itself perfectly expressive, but not before it became able to show forth supremely her conception of life, she let it crystallize.

It is evident that to the Egyptian the logic of structure was less important than the revelation of life, less important than direct usefulness to life. Here was the final point in his philosophy and the architecture shows it clearly. He desired beauty, but beauty without a practical end, either to the living or the dead, he never created, and it is through his constant demand for human usefulness that has come his revelation. Both directly and indirectly his architecture is completely expressive. We can trace his footsteps through life and into the grave. We can almost fix the workings of his mind. He has so woven his intangible quality of self into his productions that no completed Egyptian form has ever been useful in a later system of architecture.

Egypt was always Egypt and her accomplishment was not perfection. There was a lack of balance. The mind behind her building was as one-sided as that behind her other concepts. Practical use was to her more important than architectural function, the expression of national ideas more to be sought than that of structural consistency. Most things she did were in the right direction, but her preconceptions would have allowed the full development of one side to stunt the growth of the other even had her imagination and intellect permitted the continuance of such a growth. In the light of later work we are able to see where she failed, but we must remember that she accepted no examples except her own from which to draw inspiration and that what we may call her failure was largely the result of her not continuing further than what her qualities of mind considered success.

In a very large measure too it was a real success. Egyptian architecture is among the great achievements in the history of all architecture; it is an illuminating part of one of the great achievements in the stream of civilization and, when we compare its monuments with the buildings of the neighbor nations, of Syria and of the empires of the Tigris-Euphrates valley, of Chaldæa, of Assyria, of Babylon and of Persia, which are now almost completely ruined, massive mounds of decomposed materials, among which interesting fragments tempt us to more or less conjectural restoration, we can appreciate how solidly Egypt grasped the offerings of her position and her climate and, through her constant demand for fact and for stability, built almost as truly as she desired for eternity.

And if Egypt did not carry the system of construction which she inaugurated to ultimate perfection, if she did not find the ideal, it was she at least who first made patent its possibilities. Whether the Greeks drew their inspiration fundamentally from her or whether they developed along parallel lines is a matter of far less moment than that Egypt and Greece, Greece following Egypt, carried this system of construction, of columns and of horizontal superstructures, to such completion that no nation since their time has been able to improve on just their accomplishment. If it was Greece who saw more completely how to do and in the end reached as near a final balance as has been permitted to any architectural style, she had an example before her, if she cared to use it, of very great progress toward the goal she had set herself. Egypt had not the power of searching experiment with which Greece was endowed, but she did have, throughout all her creation, a sense of the dignity and worth of her conceptions and of her national life which has never been surpassed. We have followed her progress briefly, have analyzed her points of failure and seen how great was the sum of her success, but this success was followed by another more far-reaching, for Greece, in carrying to its logical completion the constructive system which Egypt had created, reached a degree of architectural perfection which must always be amazing.

CHAPTER IV

GREECE

GREECE! The naked athlete of a young world, who stripped off the cloying luxury and mysticism of the east and stood, bare, tense for action in every hardened muscle, with eye alert and mind keen to grapple with reality. The picture is significant. It was the young Greek, almost in his daily life; it was the nation in its brilliance. The nakedness of Greece was the nakedness of all physical beauty and it was more; it was the nakedness of mind; it was intellect, reason, truth so beautiful and so sufficient in itself that it needed no embellishment. The world outside was very old and sinister with thoughts that were accumulated instinct, but Greece made her own world and Greece was young. Compared to that of Egypt, her life-span was but the passing of an idea before a granite image, was but a flash of lightning, but it was a flash that revealed the wonder of real things, where the age-old altar-lamp of Egypt had thrown the shadow of a monster god. Egypt, loving life, gave all her care to its continuance after death, put her dependence on the eternity of accessories, worshiped her images of facts. Greece, loving life as well, forgot death, discarded accessories, discovered the power of abstract thought. Egypt created herself from herself, and her embellished facts are stark in their immortality; Greece was created out of complication, stripped the accumulations of her inheritance to their nakedness and trained them into an ideal that lives today.

Greece was created out of complication by the coming of a new mind that could order complication, a mind that made man the master of himself and, through himself, almost of circumstance, even almost of environment. It is true, in a broad way, that man has never mastered nature and never will, for all of him is part of nature; but with his increasing power he has freed himself from much of her local tyranny. In a physical sense the Greek had not yet done so; from the point of view of mind, it was he who found the possibility. He, not nature, was master of his concepts. We shall find the Greek ideal in man, but the Greek action grew largely from the environment that he had conquered. The duality was significant, for it was interacting and makes a certain visualization of the nature necessary to an understanding of the ideal in its application.

Greece was a center. In those days of furtive navigation, when broad water was a terror to the seamen, there could be almost no communication between east and west that did not pass through the Greek focus; no isolation from what world-currents then existed. The position naturally gathered strangers and ideas, and the position, in itself, was not luxurious. It promised life, but demanded work in payment, so that the temptation to adventure in search of things desired was always present. And with things brought home, might come ideas again, and knowledge. Apart from any national qualities, the land automatically harvested the fruits of complication and it demanded action. Stagnation at that central point was death. Concentration against the world was the real salvation, and yet the intimate land, concentrated as it was in its position, negatived this very thing in detail.

Where Egypt was continuous in its isolation, Greece was broken into fragments before the world. It was a mountain chain half buried by the sea; it was a patchwork of bays and promontories and islands, of hills and plains, of alternate barrenness and cultivation. It stimulated husbandry, commerce, curiosity and the sense of beauty, for it was exquisitely clear-cut and beautiful, glowing with pure color. It was a rational, healthful nature, requiring that man give out his best bodily efforts, efforts which, in turn, stimulate and balance the mind to clarity of thought. It was a nature of infinite promise, intimately and broadly, but in its ineradicable division there lay great danger. Concentration was impossible between communities which, for their lives, could not remain in isolation. Unified, it might have become a permanent citadel of civilization, the focal point where continents and races and nations met, but they met there in an age when meeting presaged struggle and attempted domination. And the land refused unity, accentuated the need for action, could not be a passive factor in the human life which grew upon it.

Into this land there plunged, more than a thousand years before our era, a race of men, wanderers from the less inviting north; a race of men whose spirit retained that agility of boyhood which has made youth, through all the ages, a symbol of infinite possibility. They were warriors with the souls of boys. They were boys in their keen enjoyment of the physical life which burned their veins, which felt no shame in all that the physical may imply and was clean because it did not know the possibility of shame. They were boys in their friendships, boys as they loved and hated, as they were quarrelsome among themselves and truculent with strangers; as they were brave, adventurous or crafty, reaching by trickery what they could not gain by force. They were boys unrestrained by questionings of conscience, without desire for spiritual analysis—certainly they had no taint of fulsome sentiment that apes the spiritual. Agile in mind, and hard, as they were in body; bursting with curiosity, leaping forward in their enthusiasm, examining everything, questioning everything, judging everything, knowing little, but reaping all the ripe knowledge they encountered; they were boys as they found their springs of action in their physical life and brought a new gift, even to the physical, the gift of play. They were boys in spirit, with all the possibility that is in a boy as he turns to manhood, and what we sense as potential in the boy became almost fact for this race which kept its youth, for it had brought, above its youth, the first great intellect to face the facts of life. Gradually, it fought its way into the environment that promised its desires, killing, assimilating, consolidating, scattering. It made the land its own and stood confronted by all the heredity of the past which the land had gathered. The result was Greece.

Without her inheritance, without all that awaited her from the eastern past, she was not possible. Until quite recently, our knowledge of the early ages was a chaos of myths from which emerged the two stupendous epic poems of Homer. Majestic, youthful heroes moved across the scene, against a background where fact seemed lost in legend and then, as with a sudden blaze of light, we found before us the completed drama of Greek existence, with its abstracted and visualized ideal. We sensed a prologue to the play and fresh discovery has fixed its setting. The inheritance of the Greeks piled up for ages to await their coming. From their own destined land they uprooted a senile pirate nation that lay rotting, like an aged octopus, whose tentacles protruded from the sea wherever island promised booty and were twined round the strong outposts of the main shore. It was very old, old perhaps as Egypt, grown from the sea and founded in its concepts on the sea's life. We do not know its soul, which is still shrouded in the mystery of its forms, but the forms have regained the light and clarify the legend that preceded Greece. They were abstracted—for there was beauty in them—into the ideal of form that delighted Greece. How much the old Minoan mind, the old instincts, reacted on the nascent mind of Greece we cannot tell. All the ideal was in the accomplishment; the intellect came with the youth, but there was a world in the Greek land before Greece was born that passed on, with its lifeblood, whatever Greece found worthy. And it was more than that; complication is never so direct. Much old race survived, was assimilated, enslaved, driven to other territory; lived on to feed the new during the dark ages of turmoil through which Greece grew to consciousness. And as she grew, her knowledge spread, gathering the further offerings of her heritage. Expeditions adventured to the coasts of Asia, forced, or tricked, even reluctant Egypt to reveal some secrets. The Greek mind grasped the whole ancient universe, admitted the borrowing and the stealing, founded its beginnings on what the east thought finished. This was one great originality of Greece. She could advance upon suggestion, imbue dead age-old facts with life. Her intelligence sought order in creation and in instinct, her reason discovered the abstract and the eternal in essential form.

The Greek ideal was man—all of man that the senses could realize, all of man that the intellect could define. It was the creation of the intellect working on all the facts that the senses gathered about man, about his physical life and about his mental reactions toward life. It established his relations in regard to environment and circumstance, in regard to action and in regard to other men. For the first time, man assumed the mastery and created gods in his own image. The focus of the mental process was in the intellectual power for definition. So far as all was clear in observation and in reason, or could be made so, the ideal was all-inclusive; where observation and reason broke down before those flashes of intuition that we call spirit, the Greek stopped, in distaste or in disability. He was obliged to halt before the infinite and the eternal, and he cut them from his conception of the ideal life. They could not be defined and he refused to argue their existence.

Life, as the Greek conceived it, remained a temporal, physical thing, but it was raised to the most perfect beauty possible to physical life. In his own words, the ideal man must be "beautiful and good." The beautiful was physical perfection, the good was mental, intellectual perfection. Perfection was adjustment, restraint, balance, fitness. Exaggeration, no matter how desirable any quality or thing might be, negatived perfection, for it broke down the balance, restricted the complete fitness. The highest beauty was in the balanced human body, the greatest good was in the balanced human mind. Beauty was in articulated frame, in trained muscles and firm flesh; goodness was in reasoning intellect that moderated the impulsive actions of the body and the impulsive emotions of the mind, so that both might function, interacting, to the best temporal advantage of the individual and of the community in which he lived.

All the Greek expression was constructed around this ideal and resulted from the same intellectual power which created the ideal. The fundamental method remained that of definition. Through every step in the conception, through every phase in the expression, the definite was being more completely clarified. The Greek, as he constructed life, worked with the prevision of a sculptor before his block of marble, worked with a master's sureness as he carved his related planes into a perfect image. All was distinct within his mind, for all that he desired was in the province of reason and was capable of exact conception, even in its most complete abstraction. The Greek ideal was in the intellect and the Greek intellect perfected the general intellectual function of realizing truth in fact, of abstracting and defining form. The Greek expression, even the Greek ideal itself, was essential form, for it contained nothing beyond reality, nothing that could not be wrought into form. And the forms which the Greeks conceived as fitting to expression were so completely adjusted to their means and to their reality that each phase of production, indeed all phases in their interactions, and even life itself as it was predicated, became an exquisite and balanced structure of intellectual definition.

The ideal was so finished in its abstraction that it transcends all time, all race, all circumstance. We moderns can understand it as the Greek did, could apply it to ourselves if it fitted our desires, but it does not follow that, understanding it, our human selves can understand the human Greek. He, in his enthusiasm of discovery, in his joy of life, remained a boy, and we, throughout the ages, have grown very old in knowledge and have struggled with that spirit which the Greek banished. The ideal was abstracted beyond humanity and if we make it stand for all of Greece, she must become a little cold, a little beyond the human, too much pure thought. That was not Greece; Greece lived. Her children were boys in a boy's world and they visioned a great ideal. They saw it completely, expressed it perfectly, and went on living. They were not to blame if the ideal was never realized altogether. It was all reason, and life, in its daily living, will not be satisfied with reason. Spirit and emotion will trick the sovereign balance of the intellect and, in a flash, action has deserted the ideal and followed the course of instinct. Inconsistency is human, very human in our boyhood, was human in the Greeks. They did not, could not, completely live the ideal they had erected, but that it was erected from the Greek inheritance, by the Greek mind, in the Greek land, was one of the greatest achievements in the history of the world. And it was more than the creation and the expression of an ideal. There was a serious and long-continued attempt to realize it, so that, in spite of the inconsistency of personal and of national action, Greek life, in all the higher things that pertain to life and that express life, was trained down to the essential nakedness of truth and beauty.

GREECE barricaded herself behind the ideal she had set up and insisted on a clean break, in mental things, between herself and the outside world. In this was the only unity of Greece—the unity of reason. Beyond that, she struggled within herself. She was a band of brothers, trained from the same blood and the same mind, seeking essentially the same things, brothers who magnified, in their boyish vehemence, all the small differences and fought about them. She split into communities that founded cities and defied one another as they struggled, every one in its own way, toward the ideal that race had given them in common. The separation of the land was perpetuated in the political division it had helped create; the separation of ideas within the ideal rifted the expression of the potential nation between Ionians and Dorians, between a certain eastern influence and the denial of all influence, between the dandy who cloaked his logic under agility and grace, and the fighter who stood square on his naked logic. The bitterness of separation in face of the need for unity was the great inconsistency of Greece. The oneness of the ideal and its expression would seem impossible because of this division, had not both oneness and division been facts.

The ideal did not grow from coöperation; it grew from rivalry. The bias which, aided by geography, prevented Greece from coalescing and in the end drove her almost to suicide, produced the blast which kept the Greek intelligence fanned to a white heat, so that Greece, doomed, gave to the world the greatest single impetus that civilization ever received.

And the ideal once erected, Greece was called on to defend it. All that she stood for shocked the old east and threatened with its reason the age-honored mass of instinct that denied intellect. The east was ready to strike. The hand of Persia was dominant and could hurl all the physical weight of western Asia and of Egypt to engulf this tiny thing that goaded her with its agility. Yet Persia failed, failed completely and pitiably, but she failed, not fundamentally because of the Greek arms, but because of the Greek mind. Persia fought in the old way and from the old motives; Greece struggled for the freedom to live, so far as it was humanly possible, the ideal she had reasoned. The freedom was maintained and, with its surety, came the final flower of the ideal, in Athens. Athens gave all she had into the struggle, saw it destroyed, saw herself go down to death, and found herself, among her own ashes, no longer a city among other cities, but the epitome of the Greek intellect. Her action had not created the ideal—that came from all of Greece and even here was not in the matter of action, but was the efflorescence of it. Athens alone was not the creator, but she was the great defender and, in the striving of defense, the beauty of the ideal was so concentrated in its definition that the mind of Athens grasped its every plane and gained a power over form that abstracted the ideal for all humanity.

The life of Athens remained an expression of the life of Greece and she continued the subtlety of definition that, in the end, broke down, not the ideal, but the Greek attempt to live it. Athens—and Greece—were so constituted that change was an inevitable quality of life. Each plane defined —boldly, unhesitatingly—clarified a further plane and the intellect reached at last, through matter and mind, the summit whence mind leapt into spirit. Intellect perforce must stop, while definition struggled toward the future and has caught us in its mazes, but definition, freed from intellect, ceased to define, ceased to be Greek in the classic sense, ceased to be a factor in the ideal which was expressed by Greece. Athens had the intellectual subtlety that overreached itself before the end, and she had, in her smaller compass, the separation and the inconsistency of action that was in all of Greece and brought the death of Greece, but she attained, when she stood before the nation, victor against the Persians, the ultimate clarity of vision that illuminated, not only reality, but all the possibilities of reality. She saw the ideal personified and stamped it on her life, on her environment, on her thought. She defined it in her philosophy, she visioned it in her religion and her drama, she pictured it in the pageants before her gods and symbolized it in the games that she celebrated in their honor. Her daily living was a striving toward it, and the sculpture which she wrought, so unified were the forms of her intellectual vision, was the complete reflection of her mind. This was the background for her architecture, an architecture that was founded, as the ideal had been, in the striving of all Greece. And the ideal was so clear, its expression so reduced to form, that we can postulate the expression of the architecture from a statement of the other phases of endeavor.

Greek religion and Greek philosophy were the opposite poles of the same intellectual current. The religion evolved upward from instinct, from attempts to explain the forces of nature without and the passions of man within; reached to the personification of nature and of man's attributes, to the creation of gods that were the ideal of man. The philosophy worked downward from pure thought, reasoned out man's relation to nature and to himself, stated the ideal in terms of man. The method of both was that of definition, of form. Religion, beginning in the shapeless concepts of the instinct, reacting from fear and from desire, clarified its vision through the deeper seeing of the poets, wrought a whole pantheon in which the gods were sharply distinct from the very intellectual abstraction of the qualities they symbolized, and were so completely realized that the sculptor, who fixed their images for the people, might pose them in his mind with as much assurance of resulting truth as from a living model. The gods, with their immortal powers humanly conceived, directed man into the ideal he had erected for himself; philosophy reasoned him into it. Religion proceeded to the intellect by symbols, philosophy by precepts; religion flowered into art and showed the way to life, philosophy reacted directly on life itself. Together, they controlled the Greek ideal and formed the background for all the beauty of Greek existence.

Philosophy delved into causes and reasoned its conceptions from facts that were possible of observation and definition. The statement, on its face, seems almost as truly applicable to Egypt, but the Greek intelligence had traveled very far. In the valley of the Nile, facts had been units, had been insurmountable in their inertia, had been valuable in themselves. In Greece, they were respected for the truths that might lie back of them, as starting-points whence the mind might build relationships. In Egypt, facts had weighted life into immobility, in Greece, they were the foundation of its growth. It was inevitable that the speculations of philosophy should not reach universal conclusions, and yet its inquiry, its frame of mind toward truth in facts, opened the possibilities that have led to modern science. Philosophy's great attempt was toward an exact definition and redefinition of the ideal in human existence.

The actual inconsistencies were abstracted into rational systems that might bring the highest good as the Greek humanity saw the good. Philosophy stated the possibilities and the duties of man, fixed man in the comradeship of citizens, in his friendships, in his marriage, in his care of children, in his reasoning mind which must control the whole. As moderns, we may not sympathize in all the details, but we cannot, from the statement, fail to understand the meaning. The Greek genius for form was here as patent in the clarity of expression as it could become in dealing with physical shapes.

And the clarity of statement illumined the qualities that were corollary to the Greek ideal. Mind, intellect, acting on reality, shunned the exaggerated, tried to ban emotion which experience had proved dangerous. Balance and restraint alone were the safe controls of thought and action. Cause always brought result; facts would not isolate themselves; relationship was the first fact abstracted from facts, and, to govern relationships, there was need of order and of articulation, of logic. Result might be either dangerous or beneficial and, to insure the good, facts must have meaning, the cause must be fitted to the result desired. The whole structure was built from the power of reason and, in its statement, becomes impersonal. Therein is its immortality and therein was the impossibility of complete and permanent realization. There, also, lay the inconsistency which threatens our understanding of the human side of Greece. We must remember that the final statements came from a few most gifted individuals. They were the sculptors of the ultimate intellectual form, but their material was in the facts of the nation's life where instinct played a certain part. They carried to conclusion only what the striving of the people had made possible and where, among the striving, the cold statement of philosophy began to fail, where the human welled up to meet it in contradiction, there the religion stepped in to impress the same conception of existence.

Like the Egyptian, it was a religion of offering and propitiation, not of congregations. The people were not admonished; they brought gifts and celebrated ritual. Beyond this the likeness ceased, for the motives differed. Egypt was human in the satisfaction of superstition; Greece was human in the confident assurance of boyhood, and Greece was so clear in mind, so full to express in form, that her religious observance became a series of pageants, of dramas, of games, that sculptured with groups of living actors the ideas that governed the ideal. Through this observance, all the intimate fabric of living was filled with beauty, assumed symbolic meaning. All the qualities which were the flower of the Greek mind and yet which might be lost in the stress of action, were constantly recalled before the people. Drama and pageant and game were symbols of obligation, of definition, of life itself striving toward the ideal. The Greek never took them lightly, did not stand aside to gaze, but made himself a part of them as he realized their symbolism of himself. They were true expression, essential art and, as he lived them, their plastic beauty reacted on his own power over form so that, among the Greeks more completely than with any other race, art became life and life art.

The national athletic contests were fundamentally religious celebrations which rose from the physical springs of action, from the gift of play, and they were so controlled by the application of the ideal that they gathered all the beauty which might lie in physical form. They symbolized the striving of Greek life, but where, in life, action was inconsistent and toward an unseen end, often for selfish gain, it became here, ordered, trained for a realized goal, a goal which could bring no prize beyond the recognition of worth. The games were the only action in which the race consistently combined and, true to itself, it combined, even in them, with its inevitable rivalry. But here the physical violence of Greece was moderated, balanced, articulated in honor of the gods, was given meaning and fitness and direction. In preparation, the young manhood of the nation was brought to soundness of limb and breath, to the perfect adjustment of body which permitted the mind and the intellect to function with greater depth and freedom. The athletic training of the Greeks was as important as the mental education, for both were needful to create the man who might be both beautiful and good. The demand for physical excellence was the foundation stone of the Greek conception. It was the first essential. Brawn preceded brain in the development of the race; the youth grew strong in body before his mind expanded to appreciate the need, in reason, for the dominance of the mind; beauty, to the Greeks, was necessary almost before the good could grow to create the balance. Beauty was form, and the power to realize form was the birthright of the Greeks. Beauty was the physical perfection of man, and the perfect man was the ideal of the Greeks. The great games were pageants where the beauty of all Greece was joined in the full vigor of naked action, action that was imbued with the full meaning of the Greek ideal. Even the nakedness was significant beyond the mere free movement it allowed. It was, in symbol, the casting off of trammels, the final definition of form; it was the complete joy of physical life, of boyhood. The beauty of its action became an overwhelming expression of the idea of beauty, was the ultimate vitality of an art that relied on form and became the inspiration of that plastic medium which most thoroughly represented the Greek genius, sculpture.

As the master-craftsmen saw the youths in their training grounds and at the games, as they felt the thrill of movement in the muscles, in the poise of limbs, the bend of back or swell of chest, as they sensed the surge of well being in the repose that followed action, as they realized the strong purpose behind it all in the firm lips and piercing eyes, they understood their Greece as the gods had intended Greece, and so they wrought their vision to fix the Greek ideal for all the future. And they wrought their symbols in the fashion of the ideal, with all the moderation, all the articulation and balance that was in the philosophic statement, with all the beauty that was in the pageantry of religion and with all the meaning that was the essence of both. They wrought, from the youths they saw, symbols of youth, and they created gods from the suggestion of the youth.

Critics, admitting the abstract perfection of form throughout this sculpture, admitting even the lost color which accentuated form and put meaning in the eyes, have complained of a static quality, of coldness, of impersonality. They have wanted more actual, individual life, more exhibition of soul. They have desired a contradiction, have desired the personal in abstraction. Had Greece accomplished this, which was impossible, it would have been at the expense of her own spirit. The critics have forgotten the human Greece which was, here, not registering the actual life, but was drawing, from the actual, a conception of what life might become. Greece was not picturing herself, was not creating living gods or everlasting human bodies; she was picturing the ideal she had erected. The athlete of the sculpture and the god in his humanity were not reality, but the best that might be fashioned, by the reason, from reality. To understand the sculpture, we must remember the inconsistent Greece of action which regretted the inconsistency and set up a standard in her mind that should be a refuge from it. All the passion, all the soul, is possible within the sculpture, even gleams through it when we consider the living boyish nation, but it was stamped back by the boy's hatred of emotion, by the man's intellectual power to realize a beauty beyond emotion. Sculpture eliminated all the strong violence that might over-throw the control of mind, and, in so doing, it perpetuated the greater strength that was behind restraint.

The demand that spirit be laid open for dissection has come from the conscience of centuries of struggle that have based their changing concepts on the impossible endeavor to define soul. There is no argument that can prove concepts of spirit greater than those of intellect. If there is proof, it is in the intuition, and the Greeks, while they remained themselves, refused to admit this to their ideal because it was incapable of definition, of form. Yet the facts that result from spirit are subject to the abstraction of the intellect and Greek sculpture was drawn, in its inspiration, never from formula, but from life and action which cannot altogether deny spirit. The Greeks must have felt the spiritual power because it is part of man's innate inheritance, must have seen it in the youth that was the model for the sculpture and it is evident that they did so, for it is present, if we look deeply enough, behind the abstracted ideal of sculptured form.

The sculpture grew with Greece, grew with the ideal. Definition progressed year by year, century by century. It began as hardly more than the realization of strength in the block of stone, fashioned to state the fact of human form as crudely as the primitive mind grasped the conception of man and his relationships. Observation and abstraction went hand in hand toward the completion of promise. There was no first flowering as there was in Egypt, followed by an eternity of stiffness. Greece thought form and lived form that was being ever beautified and endowed with deeper meaning. The whole nation worked, in its rivalry, to define form, and Athens, at the apex of the ideal, made the final declaration in the fifth century before Christ. Sculpture was the most inclusive art of Greece because the mind and the intellect of Greece functioned in the manner of sculpture. We limit it, in discussing art, to forms of wood, or stone, or metal, but if we look upon it as a method of expression that defines form, it may be broadened to cover the daily living and the ideal of Greece.

All this is pertinent to the architecture, for that again is fundamental form, and the reaction of any national qualities on its growth results from the manipulation of form. We are on the point of postulating, from the Greek ideal, what may be in the architecture, and of redefining the ideal from its expression in the buildings. We found in Egypt that much depended on the range and power of the imagination and on the conception of the beautiful, and what was true of Egypt cannot but be more significantly so for Greece. Where Egypt stopped among the formulations of her perceptions, Greece pressed forward beyond perceptions to their meanings.

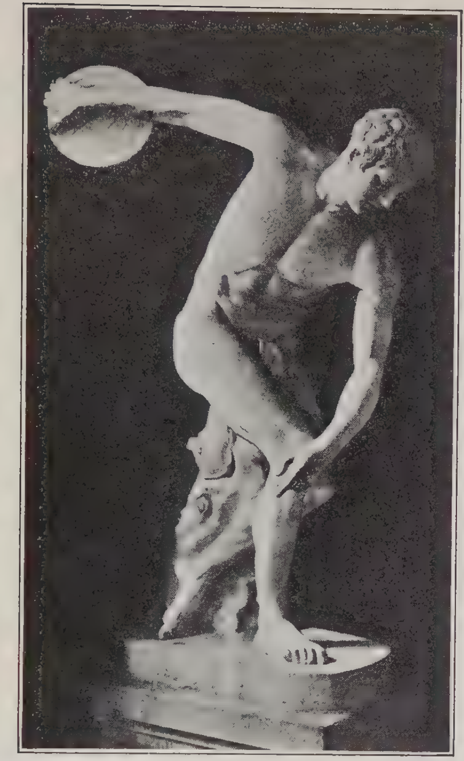
Imagination, strictly, is the mental power to create images; beyond that, it is a quality which directs life according to the images of the mind. Usually, and superficially, it is contrasted with reality, with the ability to face actual facts. The range of imagination may be confined within three stages: first, the level on which the mind does not carry beyond the senses, on which immediate facts are transformed into images; second, the level on which the intellect steps in to control the mind, on which the images are wrought from all the truths and interactions that lie back of facts; and third, the level where spiritual intuition clarifies the intellectual and sensual images—or confuses them. Egypt scoured out her routine on the first plane, Greece created her ideal on the second, we are struggling on the third.

The experience of Greece negatives any inherent contradiction between the imaged truth and truth itself. Certainly Greece faced facts and yet, strictly defined, the Greek spirit which progressed to all conclusions by means of form, of images, was all imagination, although, to the preconceptions of Christianity, it was not the highest imagination.

It is illuminating in this connection to vision a later age, when further complication had weakened the intellectual ideal. The Christian Church came to the west largely through the mind of Greece, much in the form the Greeks had given it. When Greece met the emotional current in its strength—at a time when already she had grown degenerate—her imagination had the power not only to receive, but to leap toward the emotional and to mould it. Classic Greece stood firmly on the plane of reasoned images, not because the Greek imagination could not rise to the third level, but because it did not wish to rise, because it did not consider that level as worthy as the intellectual plane on which it stood already. And we must remember that our criticism of the Greek stand has grown, in much, from ideas passed on to us from weakened Greece herself. This is no place to judge Greece, or ourselves. What is significant to us is that Greece regulated her imaginative function to the intellectual ideal from the conviction that it was the highest ideal.

And, once fixed in its proper range, the Greek imagination worked, either from instinct, or from training, or from both, with the same power of definition that was in all the mental processes of the race. Observation gathered facts, imagination sought out their meaning and their relationships, reason judged the truth of the imaginative statement, of the images. Intellect was master, but intellect, deprived of imagination, could not have attained the final summit of beauty which the Greeks achieved, for beauty is not reason, cannot be argued, cannot be postulated. The ever-present beauty of form and feeling in Greek life and in Greek expression was the ultimate manifestation of the power of the imagination of the race.

The beauty of Greece has been as far-reaching in its effects on civilization as was the intellect of Greece. True, to the Greek, the beauty, once imaged, was as much to be controlled by reason as was the imagination which made it possible. It was abstracted, balanced, articulated, infused with meaning—meaning above all. Where Egypt demanded usefulness, Greece sought a significance that gave a moral value even to physical form. The idea pervaded all expression; music, drama, pageant, sculpture. To the spiritual-minded critic, the Greek beauty becomes cold, impersonal, soulless, and to the modern inconoclast, who raises beauty without meaning to a deity, it is dogmatic, but to its creators it was, not the ideal, but the essence of its expression. The power of observation among the Greeks discovered facts, the imagination saw them in terms of beauty and, from all the beauty that was possible in man and his surroundings, the intellect reasoned out the ideal beauty that has become the immortal significance of Greece.



CHAPTER V

GREEK ARCHITECTURE

FORM as the expressive medium of the intellect; form infused with meaning, symbolic of itself; form balanced between the physical and the mental, between that which can be seen and that which must be understood; form articulated into an organic structure of related forms, with all exaggeration, all irrelevance excluded;

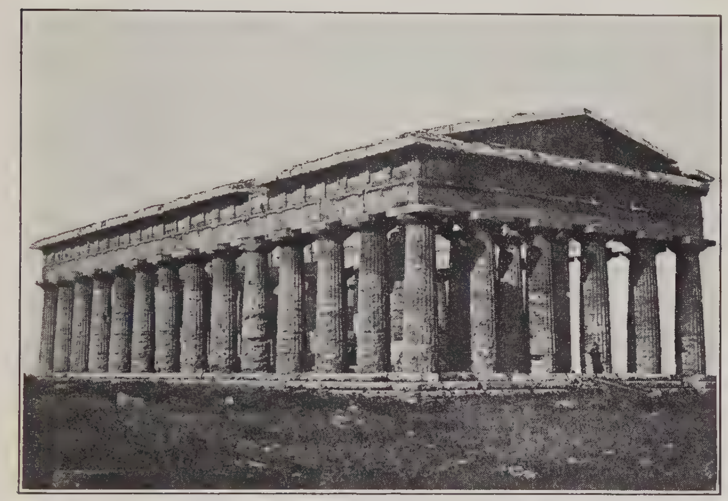
form abstracted into naked truth and so conceived in beauty that the reason, seeking to define, hesitates between the meaning and the beauty of its expression, only to realize that they are interfused and have become a unity of beauty and meaning:—form, mastered by mind, was the matter and the method of Greek definition. Through it the ideal was reached, was clarified, and was given forth in immortal form. Through it, man was defined; his life, his art. It was essential sculpture and, in turn, sculpture reacted on the definition and eternalized the fundamental Greece.

And the fundamental Greece, so unified in her expression, could not be absent from the architecture. We can predicate all the intellectual abstraction of form that defined the ideal of existence for the stone forms that, in a certain practical sense, housed the ideal, but here we must halt a moment. The statement of the ideal, as it becomes impersonal, transcends the actual, leaves Greece to become the world's, and the manner of its definition, applied to architecture, lifts the potential expression of a nation into the ultimate intellectual statement of architectural perfection. We can, in reason, ask no more of architecture than that it become nakedly truthful, articulated into an organic relationship; than that, realizing the utilitarian demand for use—for structure—it be abstracted into a unity of beauty and meaning. All this we can expect from Greece, for its possibility was the gift of Greece, but to reach the nation behind its intellect, to feel the humanity that created the abstraction, to postulate the personality of the indirect expression of Greece, we must approach the ideal and all-inclusive definition by the same pathway that Greece trod in her attempt to live it. We must remember the youthful nation in its excited, almost barbaric, vitality and we must remember the concentration of the definition on living man and his potential physical beauty.

The direct expression, the actual uses of the buildings, should help us in this direction. The ardent life of Greece, lived for itself, with but a passing shudder at the final blank that intellect could not fathom, would hardly waste its energy on great structures for the dead; their bodies were not essential for an after-life. Existence did not center in the home and we can expect little in the architecture to glorify the individual. The daily interests of the city were in the exercising grounds, the markets, the governing assemblies and in the theaters, but the clear, warm air of Greece would permit open structures to answer almost every purpose of congregation. The matter of life and death would reject architecture in the fullness of its possibility; the ideal, in its expression through religion, would welcome it. The gods were created to define the utmost in man toward which reality might aspire; the temples in which their images were throned would, since Greece was Greece, inevitably be wrought with all the power over form that was in the expression of the ideal.

The concrete aspect of the buildings we cannot predicate. The probable direct expression would state no more than usages and conjectural arrangements. The intellectual conception could eventualize no one form, or type of form, and even the Greek manner of approach could suggest but atmosphere, a possible inner symbolism. What shapes the structural members might assume would probably be influenced, in the growth from complication, by some inheritance out of the past and since from her own account Greece borrowed whatever she found fitting to her needs, we may expect to find this heritage further complicated by elements drawn from the architectural solutions of her contemporaries. The structural ideas which the conquering race brought to the foundation of historic Greece we do not know, but the race discovered, in its new land, a developed system with columns and lintels, employing sometimes stone, sometimes wood and bricks, coated with stucco and richly painted. And when, grown self-conscious, it pushed its curiosity across the seas, it found, in Egypt, the structures of countless ages, vast piles of stone, forests of columns, mysterious and brilliant with their painted images; it found, in the great empire beyond the coast of Asia, mountains of mud bricks reared into temples, broad arches which, in the stoneless country, replaced the spans of lintels, and walls lined with gorgeous tiles in decorative patterns or covered with scenes of royal brutality and pomp. From any of these elements the Greeks might pick the suggestion for their own development, might collect the matter whence their intellect, abstracting and defining, should work the perfected form. They had before them the column and the lintel and the arch, they had temples and palaces; they saw the possibilities of wood and stone and brick and they never escaped the glare of color which formulated the dazzling light and, answering a practical need, filled also the moral one of publishing the glory of the kings and the majesty of gods.

All the physical materials were at the Greek's disposal. The use of wood had been traditional in his land before his coming, and the making of bricks was easy in communities where slavery existed. There was abundant stone from the rocky mountain walls which checkered the country. It will be significant for us later to trace, so far as we can, the historic origins of the members the Greek perfected, remembering always that, being himself, whatever he borrowed he must have redefined through the judgment of his intellect and made his own, and that whatever he found at home to fail, under his searching logic, he certainly discarded. Even if he had wished to copy, it would have been most difficult, for accurate drawing as we know it did not exist. The impressions he brought from his voyages depended upon memory, and the remains of the old race in his own land were scattered ruins. His accomplishment was to grow through his innate genius, to grow with his own civilization, because the habits of a people must be formed before architecture will develop to fit and so express them, because institutions will never cramp themselves within preëxisting walls. There is always a fascination in tracing growth, but before we delve into the Greek beginnings and follow the steps that brought perfection, we must realize the accomplishment, the completed structure. We can be sure to find it fitted to its uses, to find it wrought with all the reasoned articulation of Greek statement, with all the beauty of sculptured form, and we shall expect in the personal quality of its reaction, some echo—if not a positive recognition—of youth, barbaric in its quality of boyhood, contrasted against the final definition of the intellect that reaches beyond matter to the spirit.

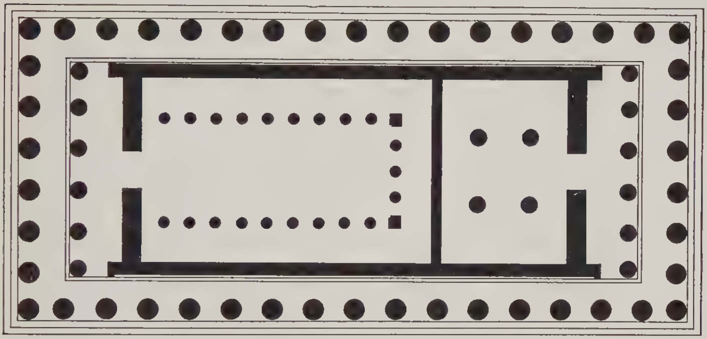


THE GREAT TEMPLE AT PÆSTUM

THE Greek temple, even more than Greek sculpture, was the philosophical stone definition of the Greek ideal. Starting with a primitive structural conception, the ancient builders, endowed with the Greek mind, constantly seeking to define functions which, in themselves, were definite, brought into being a structure which, as man can judge man's work, was perfect, the Parthenon at Athens. Yet the Parthenon was but the climax, the final concentration of many statements. The type was constant throughout the Greek lands and, before we can appreciate the consummation, it is the type we must examine, remembering that it represents all Greece.

The first and overpowering impression from a Greek temple is that it is a simple fact of naked beauty. Then, as we visualize, we feel the order of balanced line and mass, the repose of reason, satisfied within its logic and, when our eyes begin to differentiate, we see that this apparent simplicity is a harmony of many parts, a great unity of forms into one form that has become organic in its articulation. If the religion itself remained, in its fundamental boyish conception, somewhat naïve, there is no naïveté in its ultimate architectural expression. The simplicity of the temple is the result of the utmost intellectual refinement, of the most searching analysis. It is no rudimentary combination of structural members, but the most thoughtful abstraction of form through centuries of development. It is the unity of realization, not the simplicity of promise.

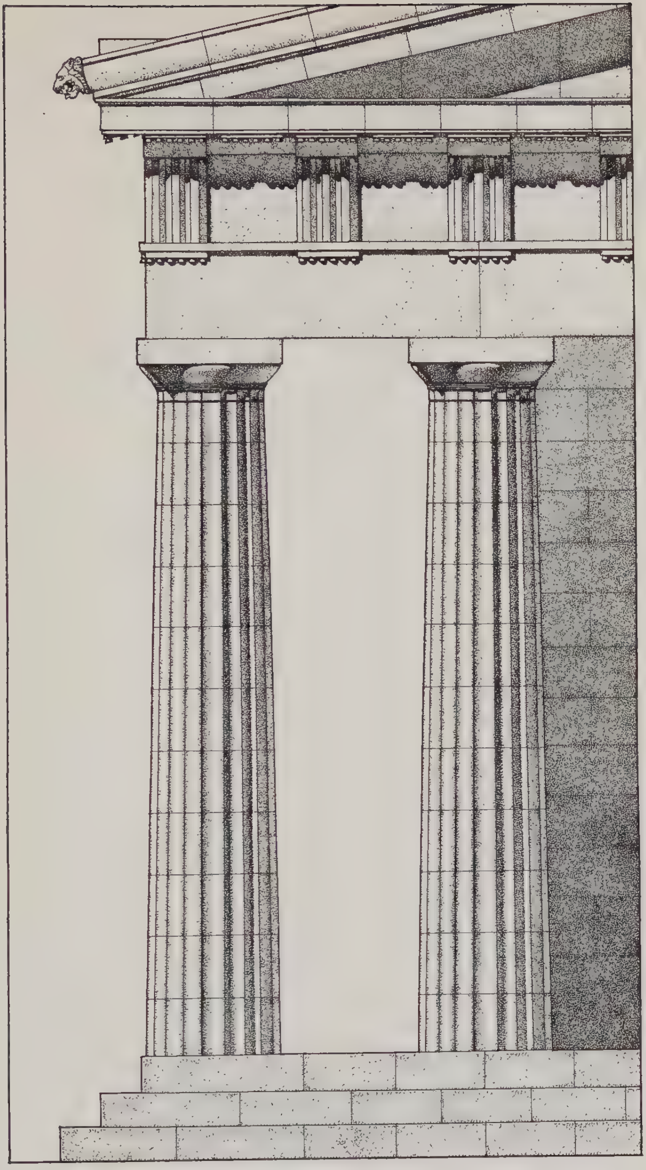
Often crowning some height which dominates its city, this symbol is perspectively adjusted to its setting so that it can proclaim itself in its completeness. Its beauty has become external, even more than internal. The surrounding colonnade binds the one or two chambers into a perfectly regular unit, which is not capable of extension and which is seldom of great size. Objectively, it is the home of the deity, is inhabited by the image of the god, withdrawn within the sanctuary from the multitude, yet visible to all and approached through none of the crowded courts and halls that Egypt found necessary for the mystery of her god-facts. Although the two nations built with almost identical principles of construction, the great difference between a Greek temple and an Egyptian is immediately patent. It is the difference between instinct and intellect, between darkness and clear light. In the Greek building there are no sprawling, separate units along indefinite axes, no forbidding walls to hide the beauty. The best that Greece could do stands compact, free on every side, proud in its accomplishment, superb in the working of its forms to express the ideal of its creators.



PLAN OF THE PARTHENON

Egypt invented many columns and used them juxtaposed, without discrimination. Greece completed two conceptions, the Doric and the Ionic, and erected them into the articulated systems which, in architectural parlance, are called orders. Of these, the Doric, bearing the name of the more militant clans in the compound of the race, is the combination which gathered the greater power of philosophical expression. The Doric temple consisted of a rectangular platform, rising through several steps, in the center of which stood the windowless wall of the oblong sanctuary. Outside was ranged the colonnade—the peristyle—which carried the heavy blocks of the lintels—the epistyle. From this sprang a second columnar series of short, rectangular members—triglyphs—one over each column and one over the center of each lintel, the spaces between them being filled by thinner slabs—metopes—in no way necessary to the stability of construction and therefore conceived as a fitting place for sculptured decoration. The triglyphs supported the crown of the building, a projecting band which threw the rainwater from the gently sloping roof, clear of the structure below. The triangular gables—pediments—formed by the roof over the narrow fronts, were framed by similar crowning mouldings and were made backgrounds for other sculpture. Sometimes a second chamber, usually with its own entrance at the opposite end of the building, was included behind the sanctuary. The method of lighting is conjectural. There may have been openings in the roof, but it seems more probable, because more logical, that the only light was that which filtered through the doorways. On the whole, the emphasis of the composition was horizontal, not so completely level as in Egypt, but sufficiently to be a potent factor in the final impression of reserve and concentration.

The skeleton of the order shows, in a most simple articulation, the requirements of stone construction; vertical supports carrying horizontal blocks. No architecture has ever surpassed the Greek Doric in its expression of stone wrought to do the work for which stone was ideally fitted, each form so reasonably designed that it showed exactly the work it was meant to do, and each so beautiful in itself that the building needed no adornment beyond the essentials of its frame. What details were added served only to accentuate the working qualities of the scheme. The ruins as we find them today, denuded of their sculpture and their color, cannot be less impressive than the temples in their original splendor, for nothing necessary to their intellectual beauty could be taken from them without the collapse of the fabric. No decoration was allowed to contradict or to interfere with the structural forms and no



THE DORIC ORDER

form was warped out of its expressive shape to gratify some fancy or to attract the eye. Form and meaning were balanced in a perfect unity, the beautiful and good of the human definition were translated into stone, and the greatest virtue in the reasoned articulation of each building was its naked structural honesty.

While throughout, the fundamental divisions of base, shaft and crown were recognized, they were never enough separated to mar the unity of the whole and, often, the design was so interrelated that the crown of one part was the foundation of that other which sprang from it. The top step of the platform which tied the building to the earth became a single base for all the columns of the peristyle, binding them into one great feature of support. Each shaft was circular and diminished upward with a delicately curved outline, repeated and accentuated by the twenty or so vertical channels into which its surface was cut. The eye could not escape the attraction of this rhythm, but was carried up, until, near the top, a sharp incision around the column gave, by a line of shadow, the first notice of the coming horizontal members, for nowhere was there any abrupt transition from support to the thing supported. The channels crossed this cut into the necking of the capital and stopped with flat curves against the lowest of a series of slightly emphasized bands—annulets—which circled and bound the bottom of the spreading member of the capital—the echinus. The annulets arrested the upward shoot of the column at the same time that they marked the beginning of the exquisite line of the echinus, whose ever-changing curve, bent outward from the almost imperceptible swell of the shaft, seemingly gathered all the push of the column that it might uphold the weight above. A square plinth—the abacus—took the impact, crowned the capital and formed the base for the ends of the epistyle blocks which rested on it. No more expressive architectural form than this Doric capital has ever been created. It was a masterpiece of Greek logical definition, a perfect symbol of its own function, denying all form or symbolism beyond itself.

The columns represented energy; every line in the composition and detail bespoke it. The blocks of the epistyle, on the contrary, were dead-weight and, as such, were left simple to create a continuous horizontal band around the building on which the eye might rest, only, again to soften the transition, this band was set back a little from the edges of the plinths below, so that its bottom line should appear broken. Along its straight top there projected a flat narrow rim, above which rose the triglyphs. These, like the columns, were active members and in them the vertical was accented, as in the columns, by channels. Once more we see the Greek dislike of too sudden transition, the Greek desire for articulation; the horizontal sweep of the epistyle definitely broke the visual connection between the two series of supports and so the outside lines of the triglyphs were carried downward a little under the top moulding of the lintels and from every rectangular block thus formed—they are called regulæ—were dropped six guttæ, small nearly cylindrical details which caught much the same high-lights as the channels of the columns below and of the triglyphs above, and created an optical connecting link. Although neither regulæ nor guttæ were structurally necessary, they clarified the intellectual conception and were accurately architectural symbols predicting the upper feature of support.

The metopes were let into the sides of the triglyphs so that their surfaces were inset, and the repetition of metope and triglyph, continued around the building, formed the frieze. Unadorned, this combination was far more than structural expression, and when the metope slabs were made the backgrounds of panels, sculptured as only the Greeks have done such things, it became a magnificent piece of architectural definition, a unity of structure and decoration. Flat mouldings crowned it and formed the bed of the overhanging cornice whose principal feature, the corona—a band much narrower than the epistyle yet echoing its horizontal insistence—was seemingly upheld by thin projecting blocks—mutules—one over every triglyph and one over the center of every metope. They were the same width as the triglyphs and their exposed lower surfaces were filled with three rows of guttæ, six in each row. The mutules might easily have been independent members set into the wall actually to carry the mouldings above them, but usually the entire cornice depth was cut from a single piece, so that the mutules with their dependent guttæ had the same optical and symbolical necessity as the regulæ.

The cornice expressed its twofold function. Structurally, it was a great drip moulding with a strong overhang whose lower surface sloped outward, away from the building, to prevent water from working back to the wall; æsthetically, it was the crown of the design, tying together, by a series of horizontal lines and shadows, all the vertical suggestion. Simple mouldings forming smaller drips and so being true to the function of the whole, topped the band of the corona, and the entire group was carried level around the four sides of the building and also up over the angles of the pediments where it was finished by the gutter-like cymatium, the final crowning member. This latter was usually replaced on the long sides by decorative, leaf-shaped forms—antefixes—which closed the ends of the roof tiles. Seen from the ground, these broke and accented the otherwise too horizontal profile of the temple.

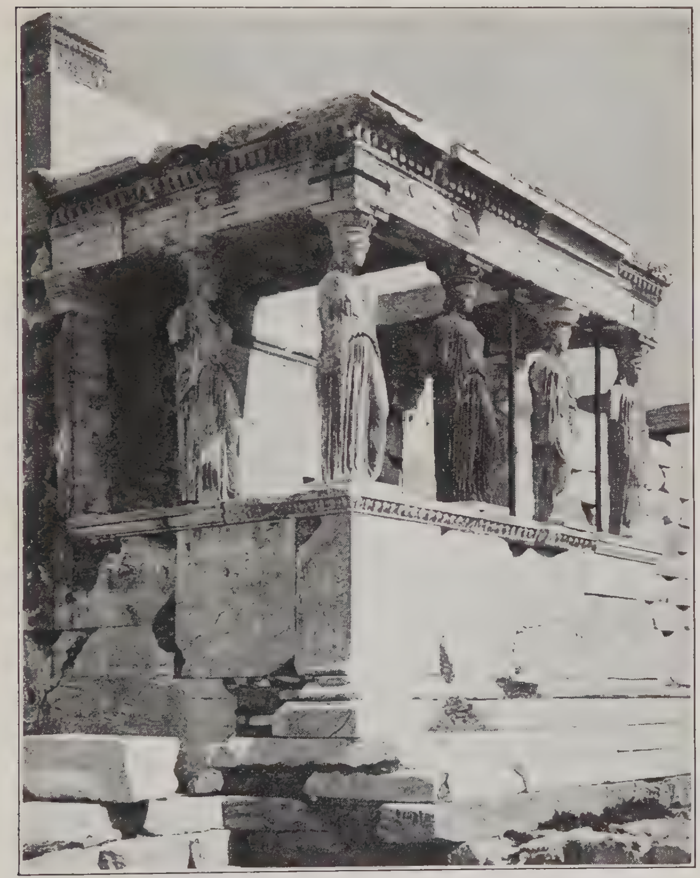
The forms of the Doric order were structural instruments wrought by the power to define meaning in form. They were completely Greek because Greece made them, yet in their abstraction there is no detail, no shade of meaning, that could not be applied to the intellectual demands of architecture in its transcending of Greece or any other nation. In her perfection of the instrument, Greece showed herself impersonal so consistently that the impersonality of perfection must be recognized as part of the personal expression of the race, but it was not the whole expression.

The simple structural combination of the instruments was the fundamental logic of articulation, of balance between support and weight, but the connection was far more intimate than could result from mere abstraction for individual use and combination for mutual stability. The rhythms of the spacings and the relations between proportions vivified the logic. The dominant alternation of column and intercolumn was echoed above, in the narrower frieze, doubly repeated in the succession of triglyph and metope, while still higher, in the cornice, the mutules doubled again the less insistent beats and, against the sky, the final spacing was proclaimed by the brilliant accents of the antefixes. The key to the structural adjustments was in the superposition of the two series of supports, so that a triglyph might be over each column and also at each corner of the building. The triglyphs were narrower than the columns and, to arrange the corner, the Greeks pushed the end column and the last triglyph out of center, pushed the vertical axis of the triglyph beyond that of the column, so that, while the spacing of triglyph and metope remained unchanged, the intervals between the last two columns were definitely shortened as each face of the peristyle approached an angle of the building. With this shortened intercolumn at each end, the colonnades came to a full stop, were definite units denying the intention of extension in either direction.

This arrangement of the corner was beyond the matter of the structure. Stability was possible without it, but here the intellect intervened to carry the logic, further than the matter, into the manner of the structure, intervened to define relationships with the same abstraction with which it had defined the functional shapes of the separate members.

There is a distinction, however, in the process. The members—the shafts and capitals and the rest—had contained within their forms all the corollary qualities of the ideal, but their shapes had been fixed by the impersonal dictates of physical usage. In the relationships between the members, the needs of use were met by almost the same simplicity of articulation that had brought stability in the Egyptian temple of the Sphinx. In the Greek temples, articulation, having satisfied stability, passed beyond the physical to satisfy the vision and, through the vision, all the higher possibilities of intellectual definition. It passed through the corollary to the ideal itself, and through the ideal to the more personal expression of the race.

The inner kernel of the ideal was man. Architecture housed the ideal and symbolized it. With the Greek power to realize relationships, we should naturally expect some recognition of the physical beauty that man possessed in the structural beauty that architecture might attain, and there were definite architectural statements that the connection of ideas was made. There were buildings where human figures, sculptured to symbolize support, replaced the columns and upheld the epistyle. The symbolism was twofold and contradictory; sculpture invaded the domain of structure and in these figures the Greek builders, creating beauty and accentuating idea, betrayed their most evident architectural inconsistency. But the frank statement brings conviction that the more exquisite and subtle symbolism that filled the Doric relationships was founded in an intellectual appreciation of the same connection. The human body was articulated frame of bone and muscles, trained to fulfill the purpose of the reason. The architectural body was articulated frame of stone form, refined also to fulfill the purpose of the reason. In man—in the youth, the athlete—there was, beyond bone and muscle, beyond use, all the beauty of curve and texture and surface and color that gave visual significance to use, created a sensual beauty that exceeded the logic of strength and symbolized the control of strength by mind. All this was possible in the architecture, and in the Greek perfection was present in the architecture. It was here that Greece realized the highest sensual—and spiritual—definition that was possible in her relationship of form.



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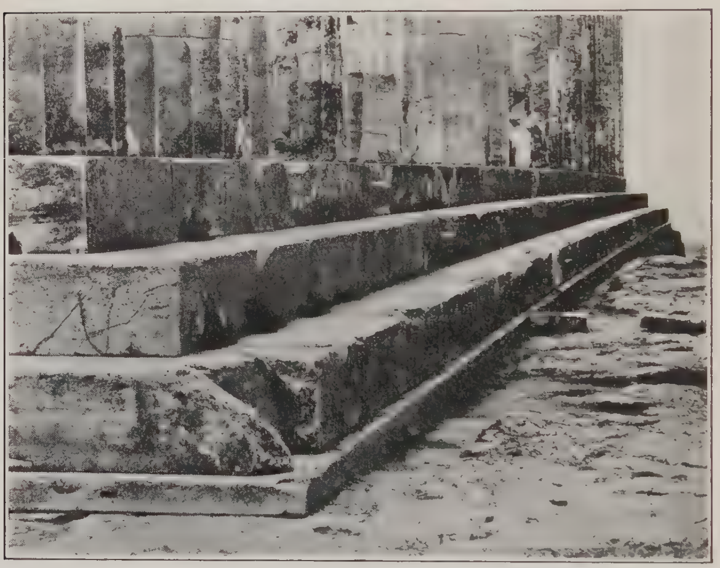
THE CARYATIDES OF THE ERECHTHEION

The arbitrary ordering of the corner members in the temples was but the beginning of an all-pervading deviation from mechanical symmetry which created a visual symmetry. This never denied structure, but made it the vehicle of intellectual expression beyond itself. The curves and inclinations which replaced all that might have been precise with a dry mathematics, show an understanding of the visual laws of perspective that bespeaks perceptions more subtle and more accurate than our own. The columns sloped slightly inward to increase the sense of stability; the superstructure pitched just a little forward to correct the diminution of perspective; the long horizontal lines arched in degrees carefully adjusted to the visual levels, so that they should not seem to sag, and every profile was bent in delicate and constantly changing curves—hyperbolas, parabo-



CURVES OF THE PARTHENON BASE

las and ellipses—that defied the eye to fix their centers of generation and that so imbued the stone with the vitality of life that these symbols of the ideal became as organic, as inevitable in their realization as were the bodies of the athletes who personified the ideal.

And underneath all this, underneath the rhythms and the subtleties that brought the life; interacting with them and regulating them, was the matter of proportion which was as clearly visioned and defined as all the rest, as intellectually reasoned beyond the dictates, again, of mere stability. Unfortunately, we have no statement by the Greeks themselves of the rules on which they based the ratios, and the only pronouncement on the matter which has come down to us from antiquity is in the writings of Vitruvius, a Roman architect who lived almost five hundred years after the best Greek work was finished. He tells us that "the several parts which constitute a temple ought to be subject to the laws of symmetry; the principles of which should be familiar to all who profess the science of architecture. Symmetry results from proportion, which, in the Greek language, is termed analogy. Proportion is the commensuration of the various parts with the whole, in the existence of which symmetry is found to exist. For no building can possess the attributes of composition in which symmetry and proportion are disregarded; nor unless there exists that perfect conformation of parts which may be observed in a well formed human being. . . . Since, therefore, the human frame appears to have been formed with such propriety that the several members are commensurate with the whole, the artists of antiquity must be allowed to have followed the dictates of a judgment the most rational, when, transferring to the works of art principles derived from nature, every part was so regulated as to bear a just proportion to the whole. Now, although these principles were universally acted upon, yet they were more particularly attended to in the construction of temples and sacred edifices—the beauties of which were destined to remain as a perpetual testimony of their skill, or of their inability."[1]

In the first place, Vitruvius confirms, in his repetition of tradition, the conviction we have drawn from the evidence of the buildings, that there was a connection of ideas between human and structural beauty. He does more than that, for he states that the connection was deeper than the final organic articulation which gave the quality of life, but the rules he gives us for proportion, in which the breadth and height of every part are measured as multiples or divisions of some important and recurrent line unit, usually the lower diameter of the column, do not apply to a single carefully measured Greek temple that we know. When this became clear, it seemed that the Greeks' perceptions must have been greater than any law and that, when mechanical refinement had been exhausted, the sense of beauty and of relationship, dissatisfied with the precision of mathematical exactness, drove them further still in search of the perfection they demanded. This may have been so, the curves and inclinations indicate its possibility, but, in a matter so essential, the defining intellect of the Greeks would hardly have built up an intricate system of proportion, only to disregard it in the execution. Some more responsive scheme than this simple line unit must have guided the Greek architects. Measurements show that the most varied ratios exist between the parts, so carefully considered, so optically, so perspectively significant, so consistently executed, that a clearly recognized fundamental law was inevitable in the original conception. There is no question about the existence of the relationships—they can be seen as well as measured—but there are many ways of making our measurements register them. The difficulty is to find out from just what point of view the Greek himself attacked the problem, and it is not unlikely that the human form was in his mind. The sinewy strength of the athlete's body was to him analogous, if it was not more closely involved in his proportioning of architectural form.

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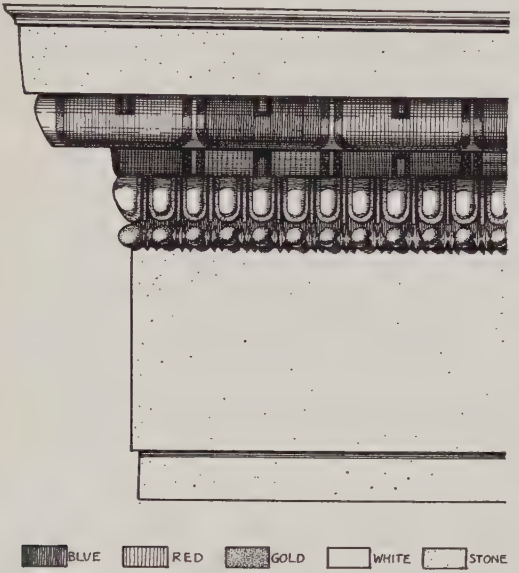
[1] J. Hambidge, *The Greek Vase*, p. 10—translated from Vitruvius.

One fact is evident, however, and is significant, not only of the Greek power over form, but in the broader question as to the possible generation of all architectural form. These Doric instruments, whatever their symbolism of the human body, whatever their proportional connection, did not represent the body. The shafts were not trunk and limbs, the capitals were not heads. There was no evidence, in their perfection, that the conception of their shapes ever had been drawn from the human shape, and there had been no such suggestion in any of the historic stages of their growth. More than that, there was nothing in them to recall any aspect of surrounding nature. The columns, it has been imagined, reflected the concept "tree." They had neither the quality, nor the function of trees. A tree spreads as it grows, becoming ever more dilated in surface to absorb vitality from the air. The Doric column would have been useless as a tree, and a tree, as such, would have been equally inadequate as a column, until it had been cut down and wrought into a column, when it must have ceased to suggest tree at all and become mere use. All the structural Doric instruments were, in their shapes, the possible results of use alone, defined by the abstracting intellect to symbolize use, and any further symbolism in themselves, or in their combination, remained intellectual, was superposed on top of use. We cannot state accurately the dim conceptions of primitive men, but we have no evidence that the first structural forms were more than the combination of what material was offered to the hand, no evidence that architecture began with any conceptual form at all, and the completed Doric order, either in detail or in mass, must contradict the broad assumption that all form is of necessity derived from nature. We need not follow the discussion further. It has no practical architectural value and we can be content to leave it to the curiosity of academic supposition.

Indeed, the Doric combination was so abstracted that with all its organic life, with all its expression of the ideal, with all its approach toward the spirit of the intellect, it still threatened to deny the vitality of personality that was the underlying boyish quality of Greece. We must not judge from the buildings in their present state that it really did so. Time has almost dissolved the boy's expression from the temples, as it has blotted his personal striving from our realization of the ideal. The temples, as we see them now, are less Greek than the Greeks completed them, and stand in a more isolated way for the ideal statement of architectural expression than the Greeks permitted. The Greeks splashed them with barbaric color that would seem to negative our rather tame conception of the intellectual dignity of architectural expression. But this color did not cloud the intellect, did not mar the dignity. The Greek joy in the color of life ran riot in masses of clear blue and red, in spots of yellow and green and gold and black and opaque white, but it ran riot in the Greek way, in form, in order, and with meaning. The boy's enthusiasm was still controlled by reason, was still part of the expression of the ideal. Color was everywhere in the architectural inheritance of Greece, but Greece discarded its pictorial function as unworthy and applied paint to her buildings to increase the definition of the relations between the parts and of the functions of the parts themselves. She made a broad distinction between the supporting and non-supporting members and usually painted the triglyphs, the regulæ and the mutules blue, while the metopes and the spaces between the mutules were contrasted in brilliant red. The guttæ gleamed with gold, making accents in the sunlight, or breaking, with their glow, the deep shadow beneath the cornice. Repeating patterns covered capitals and mouldings,—and even the flat surfaces of epistyle, of plinth and of corona,—continually tracing profile and emphasizing shape, so that the variety and order of the detail might be clearly seen. The color more than created contrast; where the glare might be too brilliant, it subdued contrast and even the finest marble was often overlaid by a delicate stain that softened shadow and refreshed the eye.



PAINTED MOULDINGS FROM THE PARTHENON—after Penrose

Beyond the color, there was no decoration in the architecture other than the working shapes themselves and the quality of their adjustments, but there was preparation in the structure, as we have noted, for the greatest of decoration. Wherever there were flat spaces, framed by structure, but evidently in themselves not significant as structure, there the Greek composed his sculpture. The abstract representations of life illuminated the structural symbolism in the great grouped figures standing free against the wall surfaces, and in the exquisite friezes that wound their way around the buildings. Sculpture and structure were not confused, but were united within the harmony of the Greek ideal, so that the temples in their last perfection gathered all the plastic power of definition that Greece possessed.

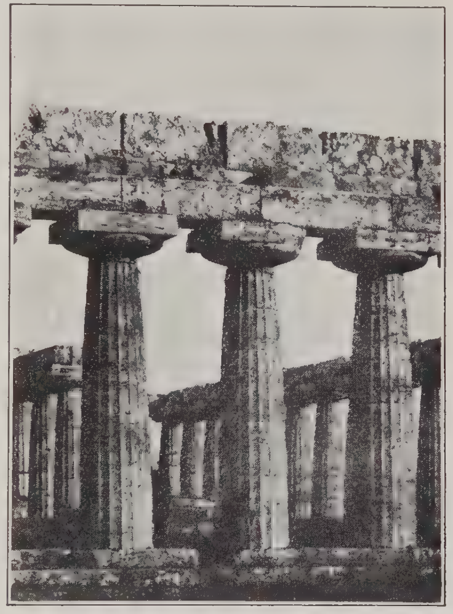
We are now ready to turn back and follow the steps in the development which made possible the Greek perfection, for since, in architecture, the chain is unbroken to our day, certainly from Greece, possibly from Egypt, we must examine, however quickly, the obscure periods of growth if we are to understand, in their perspective, the moments of masterly production. The Doric order was traditionally the creation of the conquering Dorians, but what architectural ideas they had before their arrival in Greece, we do not know. Certain features in the type which bears their name seem to have been drawn from the old work of Minoan times and certain others may have been imitated from the accomplishment which was seen in Egypt.

Although the Minoan palaces were in ruins, they still existed to excite wonder and their renown had been sung by Homer. The Greeks, as they developed, visioned a life which made them unostentatious as to their own homes, but they desired to honor their deities—to house their ideal—in the best way that tradition or experience suggested and so they made, from the halls of the ancient kings, a type for the homes of the gods of Greece, a type which fixed the arrangement of the sanctuaries throughout the national existence. It was a simple rectangular chamber with columns helping to support the roof and was entered by a door in one of the narrow ends, beyond which the side walls were continued to form a vestibule whose opening was screened by two other columns. This was the kernel of the Greek temple, fixed its general shape, and was the most definite contribution of the old culture, but there are evidences that considerable else survived. Engraved Minoan gems have been found showing buildings with sloping roofs and low triangular gables, exactly the temple form. Some decorative designs seem to have been carried over from one period to the other and, what is significant, the capital of the Minoan column might easily have been the model for the early Doric. Apparently, too, the old methods and materials of construction were used for a long time; brick walls, reënforced with wood, on a stone base, and with wooden columns. The temple of Hera at Olympia, more than any other, bridges the gap of perhaps five hundred years between the downfall of Minoan culture and the first indications of the Greek, a period during which the temple went far toward fixing its characteristic forms. The walls of this building were of brick, and Pausanias, a Greek of later times who traveled the peninsula in the second century after Christ and left a minute account of everything he saw, tells us that, in his day, one of the interior columns was still of wood. The stone columns that remain show almost every phase in the development of the Doric form and they were evidently set up, each in its own period, to replace the original wooden ones as they decayed.

If Pausanias had gone further and described the wooden column that he saw, he might have prevented much of the controversy as to whether the stone forms of the Doric order were primary or secondary, whether they were based on the earlier wooden shapes, or whether they were always wrought in stone, either copied from Egypt or developed independently. The evolution which we traced in considering Egyptian architecture, beginning in the temple of the Sphinx and elaborating in the porches of the rock-cut tombs, might naturally have led to the forms which we find in Greece and, certainly, the Greeks might have seen the Egyptian columns. It is questionable, however, whether their imaginations, in spite of their clarity of observation, would have been fired by forms so insignificant when compared with the splendor of the greater Egyptian structures whose suggestion did not pass over into the Greek work. On the other hand, the ingenious schemes which have been evolved to show every detail in the finished Doric accounted for by beams and planks are, in many features, seemingly contradicted by the robust stone forms of the first Greek temples. What probably happened was that, in the process of complication, when the transition was gradually made from the earlier materials to stone, the Greek, using his power of abstraction, kept those forms of his inheritance, honored by tradition, which could be made as expressive in stone as they had been in wood. Where they were not so, he substituted others, perhaps borrowed, perhaps developed by himself. The relationship with Egypt is tempting in its progressive logic, but not inevitable; the correspondences with the work of Minoan times are more convincing so far as they go. We cannot decide that the Doric forms were either primary or secondary. Probably, in their individual elements, they were both, but all controversy about their origins is futile in face of their final power of complete structural expression.

Although the credit for them has been given to the Dorian strain in the Greek race, although the earlier temples rose in the Dorian cities, and had all the reserve in their reasoned expression of which the Dorians boasted as characteristic of themselves—a quality which in language can be described by our word laconic, derived from these very people and meaning literally, "that which pertains to Laconia," the Spartan land, the stronghold of unmixed Dorian ideas—it was not the Dorians alone who deserved the honor. Their steadfast logic created the foundation, the strength, the frame. It could not give the magic touch of life. Sparta, herself the purest Dorian blood, built no great buildings nor cared about them, while Athens, proclaiming herself the champion of the more graceful Ionian culture, recognized all the possibility of the Doric structural instruments and made the final definition in their expression.

We must not look to find in the oldest temples that apparently simple unity which resulted from the careful organization of the many parts, although the essentials were there and a rude strength. The columns were bulky, diminishing rapidly toward the top, their profiles evidently curved, the capitals broad and bulging with a deep hollow moulding under the echinus, and the whole superstructure was proportionally high and clumsy. Not yet was the graceful dignity, the understanding of the perfect symmetry, the articulation of life. Approximately two hundred years separated these temples from the Parthenon. The whole development was one in which the forms were made continually more slender, the proportions more interdependent and the curves more subtle and expressive, at the same time that the working of the masonry increased in accuracy and the coarser stone gave place to marble.



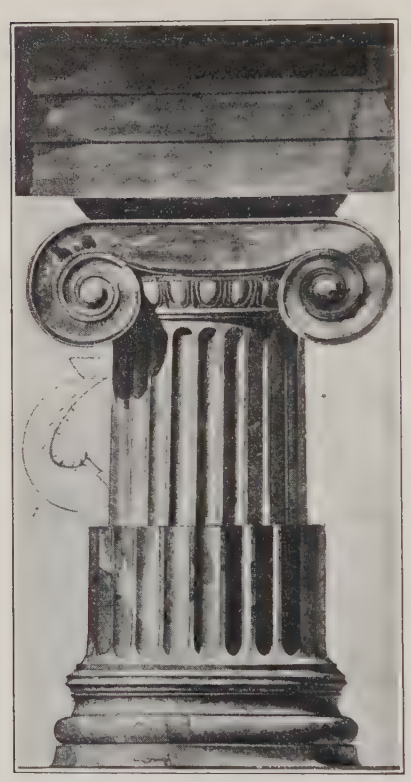
EARLY DORIC ORDER AT PÆSTUM

Looking upon these buildings, we do not wonder, as we were forced to do in Egypt, at the mighty physical power that must have been called forth to rear them. The Greek methods were simple and absolutely honest,—whatever was apparent, was true in fact,—but there came to be an exquisite precision in the fitting of the mortarless joints which showed that the defining mind of Greece was present throughout the entire fabric.

It must always be remarkable that so much advance was made in the two short centuries of historic growth, a period which we divide, for clarity, into two main parts; the archaic age, in which the oldest examples cannot have been more remote than the end of the seventh century and in which the later forms merged into those of the fully developed order about the end of the sixth century; and the period of great accomplishment, culminating at Athens in the building of the Parthenon toward the latter part of the fifth century, when the glorious defense against the Persians was over and before the disastrous strife of internecine war had sapped the vigor of all Greece. From the beginning, the development was widespread. Where once the cities of the colonists flourished along the coasts of Sicily and in southern Italy, old temples still stand, their shattered colonnades, multicolored or grey as time has repainted them, showing us the growth of one of the great achitectures of the world just as clearly as those buildings that remain or have been excavated in the homeland of Greece itself. It is almost a unique thing in architectural development that one simple type thus should be taken by the builders of a race, so clearly visualized in its early stages, so consistently refined and so perfected. It must remain remarkable to us that this development was the result of rivalry more than of real coöperation. The Doric temple is the final plastic statement that the Greek mind, beyond the inconsistencies of action, was one within itself in seeking the ideal.

The Ionic order, like all Ionian culture, had absorbed some flavor of the east, had covered its logic with a more redundant grace and, in so doing, had blunted the edge of logic. The Ionians were Greeks, shared the Greek mind and aided in the erection of the Greek ideal. The beauty they created had that same quality which, analyze its attributes as we may, we can define no more clearly than by calling it Greek. Yet, from their positions along the rich shores of Asia Minor, the Ionian cities were shadowed by the influence of the oriental nations behind them, and in their veins ran too little of northern blood to restrain their natural exuberance of expression. Their architecture had none of that reticence which dignified the Doric, nor that economy of organization which made every member visually and structurally needful, but, rather, an elaborate and self-conscious charm, the echo of a more luxurious life.

The Ionic order, almost certainly, was secondary in character; was developed from an earlier wooden type in which columns, decorated at the top with spiral scrolls of metal, carried a system of wooden beams. Its prototype was born in the further east, but through the Greek refinement its stone forms became quite truly expressive of their material and their use. The large arrangement of the temples was the same as in those of the Doric order; the stepped base, the windowless sanctuary and the peristyle all were present. The Ionic columns were comparatively more slender and diminished less rapidly toward the top. Each had its own base above the platform, a group of mouldings resting usually upon a plinth, but the most distinctive feature was the capital where—inserted between an insignificant echinus and a moulded abacus—a cushion-like form, whose ends curled downward in spiral volutes, expressed gracefully the sense of push although it did not actually press against the beam above. There was none of the concentrated action of the Doric capital, and the downward curves of the volutes gave a certain impression of relaxation. As they broadened the top of the capital, they made it fall strongly in line with the horizontal members above, and indeed, the column ended the entire vertical significance of the order, for the emphasis of the superstructure, which was comparatively narrower than in the Doric, was altogether horizontal. To increase this feeling, the epistyle was modeled into several bands, each projecting slightly beyond the one below, and the group was crowned by mouldings, all multiplying the horizontal line. There were no triglyphs and in some cases the frieze was omitted, but it was usually present as a continuous surface, the background for elaborate sculpture. The cornice expressed the same functions of drip and crown that we have already defined, but its detail was quite changed, the mouldings more complicated, their profiles more rounded, and there was added a feature, now common in our own compositions, the dentil course, a series of small somewhat projecting blocks, serving as brackets and indicating support. Color was used extensively, but



IONIC CAPITAL AND BASE

the Ionians, not satisfied with a painted design, carved it first and then added pigment to increase enrichment. A sumptuous quality pervaded the entire order in which the more numerous details separated continually and emphasized the functions of base and shaft and crown, telling, elaborately and yet beautifully, almost the same things that the laconic Doric expressed with the utmost reserve and with greater nobility.

The Ionic order lives today—or is resurrected within our formulas of architecture. The Doric stands aloof, back on its plane of history, the embodiment of an ideal. The survival and adaptation of form open an interesting field of conjecture in architectural development and the later history of these two Greek orders is illuminating. The immediate fact which makes us raise the question is that the greater of the systems stopped, the less perfect one continued. The fundamental answer is inherent in this fact. The Doric order stated the final intellectual definition of architecture, but the value of the statement for the future was in the logic of the abstraction, not in the Greek forms. The point of view from which the Doric was created should have remained vital, but the forms themselves, in spite of their abstraction, were so personally expressive of the race that, perforce, they must be as transient as the life-span of the race. More than that, they so expressed a racial ideal in their complete interaction that if the race failed in the ideal—as the Greeks did before the end—the forms lost their significance. The Ionic order never had the complete expression of the Doric and even the ideal at which it hinted was softened by the instinctive life of Asia. Its appeal was not basically in expression at all, but in the beauty of pure yet comparatively meaningless form. If it fitted a later style visually, its use did not insistently cry out the Greek meaning. It was more adaptable because of its less perfection, and what was true of the Ionic has been so of most of the distinctly national forms that have gradually aggregated to create our present formula. The greatest could not continue because their emphatic statements stamped out the expression of weaker personalities who were satisfied to reproduce rather than create.

There is a minor historical reason, corollary to the fundamental one, for the survival of the Ionic order, rather than the Doric. The Doric was so completely interwoven with the intellectual ideal that when the ideal weakened the architectural forms at once responded, became attenuated, lost all life. The declining Doric was a pale ghost of what had been the greatest; not only was not significant, but ceased to be attractive to the future. In contrast, the Ionic could not respond to weakness where it had not embodied strength, could not contradict the future when the weakness which overcame the future was accelerated by the same eastern softness that its stone forms already had imbibed. Although its members stiffened as the intellectuality of Greece retired, it did not lose its characteristic beauty and adaptability. It survived into the next period with little material change and has continued to reappear whenever architecture has been content to live in formula, has neglected to utter the fundamental statements of existence.

ATHENE was the goddess of the intellect, sprung from the mind of Zeus, and Athens was the city of Athene. The Parthenon was the great shrine in which her worship centered. It was the culmination of Greek architecture, an offering of the best efforts of the Greek race. Here Doric met Ionic, the one tempering the other until the Doric, losing nothing of itself, gained elegance and suavity, and the Ionic, graceful and decorative as always, took on new dignity, so that the two orders, mutually benefiting, fused into a single style.

Externally the Parthenon is Doric and it rises on the summit of the Acropolis, the sheer table-like hill which was

THE ACROPOLIS OF ATHENS

the old citadel of Athens and remained the holy place. Other buildings stand with it, two lesser temples and a gateway. The temples, Ionic and delicately beautiful, foil with their almost playful motives the virile austerity of the Parthenon; the gateway leads the eye through the rising levels of its Doric porticos, to the hardly more perfect Doric colonnades beyond. By contrast and by similarity the central mass is shown forth supreme. Nowhere on earth is there a group of buildings more beautiful in themselves, more subject to the sovereign which stands in their midst. All were erected under the same impetus, when Athens rose from the Persian fires. The Parthenon, begun in 447 B.C., was only nine years in building. For a Greek temple it is large, with seventeen columns along the sides and eight across the fronts, instead of the more usual six, behind which slightly smaller colonnades double the depth of the

THE PARTHENON

porticos. Within were two rooms; the long sanctuary divided into three aisles by two stories of Doric columns and, beyond, a treasure chamber whose ceiling was supported by four tall Ionic shafts. We need not detail the features of the orders; they were the last refinements of the schemes we have already analyzed. All crudity of bulk was gone. Mere strength and dead logic had been left behind and, with no diminution of strength, no contradiction of logic, the ultimate living symbol of the mind had been wrought in stone at the one moment of perfect balance.

If, in its decay, this statement of the philosophy of a race can, as it still does, compel our more than admiration, picture what it must have been in its full glory, glowing with color, sparkling with golden accents, adorned with the matchless figures from the mind, if not the very hand, of Phidias, the deepest philosopher of the beauty of the human form! Add to the organic majesty of the frame and its symbolic meaning, which time and accident have not diminished, the great joyousness of the decoration! Through this color and action of life, through this sculpture of its ideal image, the Greek artists approached its structural abstraction; faced the impersonal ideal by means of the more intimate and personal. The remains of the figures from the pediments have been said to be the greatest sculpture now on earth, and the frieze which circled the outside of the sanctuary wall, where the pomp of Athens in procession goes to the worship of its goddess, is without rival in its beauty. Picture all this undimmed by years, the life of Athens from which it sprang still surging around it; without, the sunlight playing over marble and gold and color, bringing into relief statues and columns; below, the fair city of Athens and beyond, mountains and islands of Greece; within, a certain dimness and the majesty of Athene—the abstracted mind of Greece—diffused light caressing the golden draperies and the ivory flesh. All this was the beauty of the Parthenon, the ideal home of deity, the defined expression of the intellect of Greece from the hands and minds and hearts of her virile children.

We have considerable record of the artists who directly created the clear-cut splendor of Athens and it has been thought by some that the praise was due to them alone, a group almost of supermen, reaching, in spite of reactionary forces opposed to them, perfection in every art. It is true that genius, even on an alien soil, may produce a masterpiece, but in that case it will be exotic, with little relation to its environment. The Parthenon was in no way this. It was the exquisite flower of the long growth whose roots struck deep into the traditions and endeavors of all Greece. It is true that in Athens the passions of the people sometimes were unbridled, but human nature is much the same today, and the Athenians—all the Greeks—had what we have not: a unified intellectual and artistic impulse which was inherent however little it may have shown at some time of crisis. Ictinos, the builder of the Parthenon, and Mnesikles, the creator of that most beautiful of all gateways which opened its approach, were supreme architects, but their genius showed forth in no new and astonishing departures from tradition, rather in the moulding of tradition to its final perfection. Their powers perhaps have never been surpassed and yet, in the last count, their accomplishment was the product of the Greek nation, for, although our word architect is Greek, Greek architecture inevitably depended less on the innovations of individuals than on their guidance in expressing the ideal that controlled the race.

It must at first seem strange that these buildings, so definitely dependent on development for their realization and whose development was so short compared to all the long growth of architecture, should remain unrivaled in their achievement when tradition and knowledge have been multiplying through all the centuries since their erection. Why should not we, knowing the Parthenon and so much more, better its perfection? Why was it not a stepping-stone to something infinitely beautiful today? The answer is in another question. Why have we deserted the ideal? The Greeks retained the secret of its creation, but they stated the ideal itself with all the clarity that is possible in human statement. Why have we disregarded what we could not fail to understand? The second answer is in the inconsistencies, the experiments of complication. New races, other nations, came forward to play their parts, brought different bents of mind, different ideals of life. They were not satisfied to accept the Greek statement as the final one and yet through all their struggle they have added but little to it.

And so the Parthenon remains more than the culmination of Greek architecture; it remains, in its ideal statement, the culmination of all architecture, for no other building has risen on the earth with as great beauty of usefulness, with as perfect adjustment of form. Once only, after more than fifteen hundred years, there grew its peer in another development, the Gothic, so different in structure and in ideal that there was completion rather than contradiction of those things for which the Greeks strove. Together, these two amazing architectural achievements seem to fix the present sum of man's accomplishment. If we shall find in Gothic work the outpouring of those aspirations which had gathered in the hearts of men during a thousand years of Christianity, we have found here in the Greek the intense realization of the beauty and sufficiency of human life. Critics have been disappointed that the Parthenon did not possess the aspiration, the power to soar. It did possess all the spirituality of the ultimate intellectual definition of life. To go beyond this was to reach further than the realization of the civilization it expressed. If the Gothic was to be largely soul, the strong sinews of the Greek showed those best qualities of the body whose balanced training set the soul free to go forward. Without the

Greek, the Gothic could not have been attained, and the Gothic, once accomplished, had lost some of the abstract beauty that was in the Greek.

The athlete and the enthusiast, man with every faculty trained to do exquisitely, and man with soul aspiring toward some great thing beyond himself, both are necessary in the world. It is not for us to decide that one is more worthy than the other, but here for once at least, in its perfect definition of naked form, the beauty of the athlete was supreme.

CHAPTER VI

ROME

IT is a condition of complication that nothing shall remain fixed. The muscles of the athlete become flabby or bulge in exaggeration, the mind of the aspirant falls back to earthly things, the momentary perfection of adjustment is lost and only after a long struggle re-created under different conditions, by other men, with a changed emphasis.

Greece tried to isolate herself within her intellect and failed because both intellect and circumstance carried her beyond the ideal she had set as barrier. The intellect continued its definition further than the facts on which the ideal was founded, denied much of the fundamental Greek expression, fumbled with spirit. This was evident in the changing philosophic statement, in the drama, in the sculpture. Much of the old power over form remained, but the abstraction—the ideal—gave place to the more personal, verged on the sentimental. The boy's almost cruel directness which had been the strength of Greece was already clouded by subtleties of feeling, drawn from within, when destiny flung the Greek influence broadcast by force of arms.

The Macedonians, cultured by Greece, turned to possess her and flamed through her to the possession of Egypt and the east. The old instinctive Asian culture was subjected to the overlordship of the Greek mind, but the Greek mind was already weakened. The barriers were falling, complication was continuing its inevitable progress. For a short lifetime the balance hung; the world was unified and the world was Greek. Then the unity collapsed. Nationalities reappeared through the Greek film. The world was at war again, but it was a changed world with new relationships, new foci. Greek blood was spread far beyond the Mediterranean shores; suggestion from the Greek impulse reached to touch India and the further east, and the Greek impulse, in reaction, was easternized, was opened to all the instinctive emotional conceptions it had banished.

The world was growing in the west. Greek colonies influenced new nations and found new races that had not yet grown to the consciousness of nationality. And, in a contradiction of position, Greek mind met eastern mind again. Carthage, the Phœnician city, held the key point on the coast of Africa. Eastern ideas and blood had jumped the Greek conquest and threatened to orientalize the west.

Communication was stimulated, ferment of action and idea was everywhere. All the possibilities of intellect and instinct were juxtaposed, combined locally in unity or conflict. Civilization had lost the Greek intensity of focus and awaited some new dominating emphasis to reshape life into different form, on another level.

Among the little states of Italy, Rome was the one nucleus harder in bone and brawn than all the rest, symbolized its birth by the harsh legend of deserted twins suckled by a she-wolf, who battled for supremacy to the death. Much of the wolf was always in Rome's nature, and the hero who sucked in that wild strength was an uncouth giant beside the Greek athlete, a giant sober-minded, persevering, mighty in his valor, colossal in weight of blow and tenacity of hold, but slow in intellect, lacking in imagination, ignorant of, and disdaining, the form that Greece had defined as essential both for body and for mind. He was a giant with the power for good, as he saw good, behind his strength, but he saw no good that he held sacred from his strength. He made the world his world, fitted nation against nation like the pieces of a gigantic puzzle. There is more in the comparison than the incongruity of the picture; the empire that Rome built retained its contradicting individualities, was set together by conquest and held so by the power that could maintain physical order, that could live and prevail on others to live by law. Rome did not bring a new ideal to civilization, but her strength held the old world steady while the new ideal germinated from the complication of the old.

Rome had too positive a nature, however, to be merely the crucible that held civilization suspended in solution, to be merely the filter through which the old ideals were concentrated for the benefit of the future. Certain things Rome added to the mixture so that, beyond the bias of her combination, civilization drew new qualities, new emphasis, from the Roman nucleus. Egypt had made images from facts and lived in the shadow of their bulk; Greece had related images from the truths behind facts and lived in a world of reason; Rome ignored images altogether, plunged at facts themselves and lived in a world of action. In her life and in her culture it was the thing done which was insignificant, not the thing reasoned or felt. It is the events which are important, not to us in detail, but in the tendencies and in the national characteristics which urged their doing. Rome constructed her world into a fact of physical unity and she constructed physical daily living into facts of health and bodily luxury. The possibility of these things was Rome's real gift to civilization. She was the first practical engineer among the nations.

Rome's action began in the tilling of the soil and in defense of the soil. Her very language was one of agriculture and of war. She was obliged to fight for her chance to live and, once the chance was sure, Rome had become the organized nucleus of her later empire. She had learned that the best defense was in aggression and that the power for aggression came only from unity at home. All her early national life was struggle; struggle of adjustment within, struggle of subjugation without, and subjugation of clans and settlements so related to herself that the Roman conquest may be said to have fused with Rome until she struck north against the Etruscans. Already she had complicated with them, had been controlled by them in her first weakness and their influence was important for her future because they brought her some culture, gave her some instruments that she found effective in her endeavor, as engineer, to erect a state and to create the healthful and matter of fact environment that she desired for the state.

It is impossible to disentangle all the strands that made Rome's point of view. Some of them were Latin, some Etruscan. Hints even came from Greece through the Etruscans and through the Greek cities in the south. Very much of Greece was later to be grafted on the Roman trunk, but the Greek ideal never became Rome's. Rome's mind remained founded in the soul, founded in wealth, founded in war, founded in the state that had arisen on the soil from the exigencies of life. Unity of purpose in the state had grown through bitter striving for prerogative. Never before had there been the same complication of adjustment proceeding from struggle and fixed in law. Rome's mind was hardened in its infancy, did not easily react to beauty, did not have room for imaginative impulses, was satisfied on the material plane without embellishment. All this is evident in the expression that we must recognize as truly Roman.

We must reiterate that the vitality of this expression was in the action, was in the law which regulated action, was in that bent of language which argued action and applauded it, and which formulated law. Also it was in the comfort and sanity of living, in the draining of pestilential marshes, in the building of sewers and roads and aqueducts. It was tense, suppressed, somber; overlaid life with a stern morality that denied the joy of life. History has taught us to acclaim—whether fact or legend—the father who killed his victorious son for infringement of his orders and the violated virgin who stabbed herself, demanding justice, and we acclaim, not real morality, but the hardness of Rome's one-sided mind, her monomania for exact law and duty as bald facts that her unimaginative strength could not see in their true significance. The inherent tragedy of Rome was that she could not see beyond facts, could not imagine and failed to find the deeper truths.

All the expression that we call Roman and that does possess imaginative quality was borrowed, was overlaid on life. There was no greater virtue in the Roman laurels than the tolerance which accepted foreign ideas in those realms where Rome herself could not delve, so long as these ideas did not seem to interfere with Roman action; and there was no greater danger. All the virtue was in the tolerance; the danger was in the fact that Rome could not discriminate, could not understand the ideas and their significance in the true relationship to action. The problem of Rome's expression becomes diffuse; it must seek, through various paths, differing significance. There was the fundamental strain of Rome; there were all the waves of outside influence that Rome flavored rather than digested; and there were, in all the floating combinations of ideas leading to action or denying it, summarizing all that civilization had accomplished without concentration into unity of motive or ideal, some factors on which the new ideal, when it did come, might seize, through which it might climb to dominance and which, from use, became incorporated into the manner at least of the ideal itself.

THE Etruscan culture came so early in the development that we must count it Roman in the result, and the practical unity of Italy brought no further significant divergence than the seeping in of the Greek suggestion. Through these earlier centuries, Rome found herself and fixed herself, laid the foundations of her law and began the flexibility of her organization that permitted the self-rule of a city to spread a net wide and strong enough to enmesh and hold the world. During this time there was one issue in the action that had a negative cultural importance perhaps incalculably great. The northern shore of the Mediterranean has always progressed toward the complication of civilization which in our own perspective we designate as western; the African shore has been the pathway by which the east has sought admission, has threatened to negative the progress. As Rome emerged, potentially a world power, she found the east, in Carthage, arrayed against her. In the bitter struggle Carthage was destroyed, her influence wiped out. Here was no tolerance, for Carthage had restricted the Roman action. Rome and the western progress controlled the west and, for more than a thousand years, the east reacted on this progress only through the filtration of ideas that the later tolerance of Rome permitted.

In a general way, the beginning of our era marked the turning in the changing combination. The world empire was established. The republican city had reached the limit of its power as a city and had passed it. The old cruelly moral population that had ruled itself and, through itself, the world, had weakened under its contact with the world. The ferment which its hard-fisted power had brought to physical unity had entered the soul of Rome. Morality threatened to become a byword, the sanity of living had become the luxury of living, and the strength was brutalized. The hero had turned gladiator with all the qualities, except the cowardice, of the bully, but he remained the engineer and, to his own undoing, he remained tolerant. In his indiscriminate toleration of things that at bottom he could not understand, he grasped the rottenness of the old instinctive east, made fashions of it and assumed it to be virtue. And in his reveling, the reins of government slipped from his hands. The hero, Rome, ceased to be the center in the engineering network, which was order, and the contradiction of Rome's original republican assumption, the emperor, ruled in his place. The transition was masked and gradual. Temporary dictators were followed by a dictator for life; the early emperors governed through the machinery of the republic and they were Romans, but the separation was complete in possibility and soon became complete in fact. Rome ceased to be the power in the empire and the Roman order, the Roman law, the Roman faculty for stability of structure, became the weapons of a despotism whose idea had originated in the east.

All this was possible, much of it accomplished, when Christ was born, when the inspiration for the new ideal was given to civilization. It was in the irony of history that the mastering potentiality for decay should come from Greece, from Greece, herself in the thrall of Asia, Greece with the ideal discarded but with all the old agility of mind present, if softened. The Rome that had grown fat on conquest swallowed Greece whole, to put it brutally, and the Greek mind and art became a Roman diet, a delicacy for the enjoyment of new wealth. Rome did not understand it, but it pleased the wealthy Romans to pose as patrons and collectors of intricate ideas and vices as well as of the statues and the great literary monuments which still stood as symbols of what had been the greatness and what already, to the Romans, had become the antiquity of Greece.

And the influence toward the decay of that which at least had been the single-mindedness of Roman culture once given, suggestion poured in from all the further conquest. The old frugal city, which had ceased to be regal in any practical sense, became the meeting place of all the luxury, all the ideas, all the extravagances both bodily and mental, that civilization had toyed with. Rome drew toward herself, through all the strands of the net which enmeshed her conquest, all the individual qualities—and combined they were less strength than weakness—of the nations she had juxtaposed. The result of her engineering resource reacted on her reaction from her old frugality and made her mind, which could not discriminate, which could not motivate into a unity, itself the toy of civilization.

The city became a turbulent compendium of the empire, of the world. The opposite poles of thought and act were crowded within its limits, but there was a distinction in the interactions which is important because it forged the future. The separation between east and west was never welded, although the edges of the rift merged and shifted. The culture of the east was finished, was diversified and old; before Rome, broadly speaking, there had been no culture in the west. The east produced the wealth and gave, for good or ill, the impulses which blew across the Roman mind. The west received what Rome could formulate. Its nationalities had been weaker before they had been subjected; its Roman aspect was more truly Roman, its last reaction toward the future could throw aside some of the eastern influence and build into the future on the principles which we call engineering and which were the permanent gift of Rome.

THE expression, through form, in word or plastic material was the expression which Rome borrowed, definitely in manner, often also in the matter, and it was predominantly Greek because the Greeks were more than any other race articulate in form and because the Greek impulse was more sweeping in its power over Rome than any other. It was an expression which had little fundamental progressive influence beyond Rome. It is an astonishing fact that when the dissolution of the empire in the west finally came, the externals of imperial culture seemed to melt away with the temporal power, leaving the potentiality of the new ideal which had been growing in spite of them, to reconquer the conquerors of Rome. The significance of Rome in the history of the world hardly can be exaggerated, but the significance of her mundane expression was overestimated—and still is so—because after many centuries men arbitrarily turned back to it and, seeking in it an ideal which never had existed, created much of the formula which restricts our own expression today.

It is for this reason that the sculpture and the literature of the heyday of the empire retain some pertinence for our present study. They became models for a later age and, whether or not that later age truly reflected Rome, a statement of the Roman point of view is needful for an understanding of the later position toward artistic expression and of our own position. Sculpture is the more enlightening to us because it deals with the same plastic, sensual form with which architecture covers its structure. The word covers becomes at once significant because it restricts form to the surface and because the Roman art had done just that thing. Form had lost abstraction, had ceased to be inherent meaning, had ceased to symbolize ideal, had become mere shape. True, Rome, grown rich, loved symbols, but not in the Greek sense. Roman symbolism was allegory in its crudest statement, used for the glorification of Roman power and Roman virtue and Roman wealth. Characteristic costume or distinctive objects defined the meaning which was as external as was the significance of the form; and form and meaning had lost all essential unity. Sculpture retained but the shell of the Greek expression and copied forms already, in the Greek, exaggerated, sentimentalized—that is, become personal, drawn from individual observation.

But since there was vigor in the individual Roman, there was often the semblance of vigor in the sculptured shapes, reflected from the actual and not proceeding from the intellectual power for definition in the artist. Greek sculpture in its weakening had tended toward the episodic, had suggested stories. Now the Romans told them in all the direct detail of a state report chronicling a campaign, wound them in relief around the towering columns that were set up to signalize a victory. There was all the gulf of mind that separated the two races between these marching Romans with their baggage and their prisoners, in their religious sacrifice and in their triumphs, between these intimate personal figures and the ideal, abstracted action of the frieze around the Parthenon; all the difference between fact that may contain beauty and the essential beauty which is inherent in the balanced relationship of facts.

Fact—the true shape of fact regardless of beauty—was injected into sculpture by the demand of Rome and it was Rome who may be said to have created portraiture as a conscious branch of sculpture. It was great portraiture. The lingering Greek power to fix the details of external form was here applied in the direction that Rome best understood. Bronze and stone Romans were multiplied beside the living and many of them remain to show us, not the type, the idealized citizen, but the individual in all his varying idiosyncrasy. It was great portraiture, but it was not—could not be—the greatest art, for, as we have said, it minimized the abstracting, the imagining power of the artist and formulated mere observation. It had ceased to be a visioning and was become a commodity to be ordered, purchased, accepted or rejected by a discrimination other than the craftsman's. To the old Greek the power over form had been an intellectual weapon and a racial weapon; to the rich Roman—and there is no evidence that the poor Roman regarded it at all—it was a personal craftsmanship whose results were bought to gratify the sense of wealth. This is not to disparage the Romans. They were great in many things and they were more as we have grown to be than ever the Greek was. The unity of living which was the Greek ideal was as foreign to the complexity of the Romans' life as to our own. The expression of any art as a fundamental part of life was a contradiction of their action, and art, throughout their dominance of the world, was an external thing, a matter of personal statement, of individual pleasure, remained so even in the allegories which symbolized the magnificence of the emperor and the state.

These same qualities—of the actual, of the personal, of the pictorial in a certain sense, and frankly often of the superficial—can be traced into the word forms of the literature. Here was also much dependence on the Greek, but there was here more that was truly Roman, for the real Roman matter was better expressed in words than in plastic form and the interpretations of Roman life and thought, the glorification of Roman deeds, the exposition of the engineering power of Rome, that influenced her action, made the writing more all-inclusive in its revelation than the sculpture, more illuminating of the fundamental things that created her significance in history. But the illumination of even these fundamental things reacts to prove our present point. The departure of the sculpture from the ideal was not in the misunderstanding of a foreign expression become a Roman fashion, was not all in the decadence of that expression before Rome found it. Copy and decadence were operative in the large result; can be felt not only in the sculpture but in the literature whenever it attempted imaginative creation, but even had they not been present as restricting forces, the deeper interests of the literature show that the Roman spirit could never have risen to the abstract and the ideal because Rome had no inherent power over form, could not transcend facts, could not forget the individual, could not order her conception of life into the unity that can be expressed by art.

Religion, even in the nucleus, was not the mainspring of Roman action, and was not a substantial power toward unity. Rome borrowed here as blatantly as in all things where imagination was required. To some presumptive primitive worship, Etruscan gods were added and then Greek deities. It has been said that Rome dignified the Greek gods, even that she more completely abstracted them. Certainly she forbade them many of the vices and much of the excitement which the Greeks allowed, but the process was not abstraction, it was subtraction. Greece had made gods in the image of her ideal—man. Some of them symbolized the forces of nature, some the powers and passions of men and all were abstracted into superhuman men and women. Greece, in her definition, passed on to relationships of forces and powers and passions, and she symbolized them by interactions between these superhumans who were so intensely human because of their very abstraction toward the Greek ideal. All the action of the Greek gods had symbolic meaning, was created by the imagination to show underlying truth. Rome was blind to this. Her stern spirit saw in the conceptions but the inconsistency of the human side. She moralized the gods and stripped them of the deeper truths that imagination had abstracted. They became mere powers and faculties with names, and in their sculptured images they belonged to the allegories we have mentioned, recognizable by their defining dress or objects. Throughout this process we can trace the same reaction toward expression, the same failure of the imagination to push past the externals to the fundamentals.

And as Rome gathered complication she deserted the gods she had devitalized; left their worship to become a formula—a ritual for official action—and turned, in her tolerance, in her individual curiosity, to all the varied concepts which complication had juxtaposed within her limits. The empire and the city were full of sects, of contradicting beliefs and forms of worship, of cults from Egypt and from Asia, of philosophies that had created systems from all the intricate branches of Greek reasoning. Whatever the individual believed to be his own best guide to what he himself considered good, this he was privileged to accept and publish so long as it did not interfere with the Roman action, with the god-ship of the state in the person of the emperor. This condition became the crux in the events of history for the great power that was destined to formulate the ideal, to create new unity of progress from the static Roman combination, would not—could not in its essence—admit the Roman presumption of physical force so long as the new ideal and the physical power were in a position of possible conflict.

Christianity made its appeal to man in the promise, if not the definition, of just those intangible and immortal things which the old Greek intellect had not been able to formulate and had therefore banished. In so far as the pagan Roman world stood firmly on the material level which the Greek ideal had established—and official Rome still did so—Christianity contradicted its foundation, threatened its self-sufficiency. Here, of course, was the reason for the persecution of the Christians, for the almost unique denial by Rome of tolerance. She understood, and rightly, that if this sect grew there was danger to herself, but she did not understand that no power at her command could stop its growth; she did not realize that all the process of complication had made it necessary, that even the complete fulfilment of ideals—had this been possible—which were founded in earthly things alone, could not prevent man from trying out, at least, this new ideal whose promise minimized the constant worldly disappointments.

The Greek intellect had touched spirit and retreated, but curiosity had continued and Greece had become more sympathetic toward the intuitive conceptions even before the conquest of the east had carried her intellect to live in intimacy with instinct. Perforce there was some mingling; mental processes gained flexibility as they lost distinctness; instinct gained form and motive, gained almost the distinctness that the intellectual definition lost. Throughout the pagan world there came to be an undercurrent of spirit that was concentrated when Rome united the world and tolerated all its possibility of varied thinking under the assumption of Rome's own material impregnability. There was not in all this any prediction of Christianity, but there was preparation for it. Men's minds, particularly Greek minds, were ready to grasp this purest of all conceptions from the imaginative instinct, but they had not so far forgotten their own birthright of the reason that they could leave the conception in its purity. Christianity began as a socialism based on perfect goodness, but by the time that it had conquered opposition, that it was tolerated and then recognized as the state religion, it had been formulated and defined by Greece and it had seized from Rome the very constructive weapons that had been the strength of Rome.

The old distinction between the east and west remained in operation. The empire was on the point of positive division. Almost within a century, the Roman power in the west was destined to be passed on to new races and the Roman power in the east to be relinquished to the Greeks. Christianity had been formulated for the empire by the Greek mind and while the empire lasted the Church remained superimposed on the manners of pagan life. It could control, could be intolerant in its own turn, but it could not eradicate all the habitual reactions of all the centuries of culture behind it. The new ideal had been stated for and accepted by the Roman world, but the new blood from the north was necessary before the ideal could be grasped without preconceptions. And even within its unity, Christianity already reflected the inherent cultural separation; notwithstanding that the Church, once established, had made itself coincident with the political organization of the empire. Organization, however, could not contradict heredity and the Greekish subtlety of definition which had overspread the east was contrasted against a more positive power of western faith. When the empire split, when the barbarians gripped the west, they were met there by a religion that possessed all the engineering power of Rome to press forward a faith spiritual enough to appeal to their imaginations and to become the driving power of their existence. In the east, where the old contradictions remained, the old material life continued, under the Roman name and under the assumption of the sovereignty of Christ, but driven by a new Greek impulse which could not altogether deny the ancient heritage.

All the later expression of the empire became the expression of the Christian Church modified by the varying intensity of racial character in the different regions. The religion which in its essence was purely intuitive—altogether drawn from the imagination—reached toward conceptions so far beyond worldly facts that, in its beginnings, it almost refused the intervention of any form to define the objects of its aspiration. It could not pass through the Greek mind, however, and remain formless, either in its dogma or in its more physical expression which made use of art and which we shall find so vital in the latter architectural growth. Christianity, in a sense, was paganized in its conquest of paganism and the pagan form was drafted into the service of the Church. The result of this might have been more far-reaching and restrictive than it was had not the process been transferred to the Roman center and had it not taken place during a period when the pagan expression had dropped to its lowest ebb. The appreciation of form had withered amid the turbulence and the growing poverty of the weakening state and the productions of the earlier Rome, external as they had been, had almost ceased. The very fact that they had been external to the truly Roman powers partly accounts for this. Greece, even in her decadence or in her Christian revival from decadence, could not cease to formulate, where Rome, as her power lessened, soon lost the excess vitality which could find interest in what had been always fundamentally foreign, while she still retained some aspects of her constructive faculties. Christianity, becoming potentially a universal expression, reflected all this. It had brought the deepest possibilities of the imagination to a world where the imagination was satiated in its material life, and its expression followed the same racial separation which had divided the underlying intuitive conception of the religion itself. In the more Roman west it carried spirit into the future on a structural organization which finally achieved form; in the east where Rome had never materially influenced the ancient culture, form dominated spirit and the expression could not but remain material.

The history of Rome can be visualized into great successive impulses. There was the first period of growth when the fundamental Roman things were so fixed that they could leave their mark on all time, when Rome, the engineer, was trained in a combative youth of comparative poverty and virtue. Followed, the first excesses with the realization of immense power, the rejection of old ideas and the readjustment to the empire where all the factors of complication were juxtaposed, when all that was to fill the rest of life was seething in a mind bewildered among the contrasts, but still holding to the practical power that was in the early training and was the one unifying strength throughout the turmoil. Lastly, the emergence, from the turmoil, of an ideal that realized the strength and used it, but which had come too late to restore the vigor, too late to complete the unity, too late to be altogether understood. The empire was divided at the moment when the ideal was recognized, and the new capital was established at Constantinople in the Greek lands. Of course there was a passing nominal unity, but the real political duality was the admission of a fact that had become physically operative immediately the unity of force had relaxed. The empire was two empires and had always tended so. Now the west, ceasing to be the only focus and deprived of the interest of the east which turned to its own new center, could not withstand the repeated blows of the barbarians on the European frontiers, relaxed and was submerged. Rome was no more a living power, but what in its physical decay had brought contempt was to become the symbol of God-given sovereignty. Rome fell, but the Church did not even falter and the ideal passed on to new blood which had never known Rome's pagan mundane life and which could state the ideal in the greatest of new expression. Barbarian Europe was to make the final definition—if definition were possible at all—of the Christian ideal, but that carries us beyond our immediate interest, beyond the living Roman impulse.

And, in a sense, Rome did not fall when the west was lost, did not fall for a thousand years. We have accentuated the Greek complexion of the east and the underlying orientalism which modified the Greek. We have found that the Christian ideal which Rome recognized and made universal came, in the form which Rome accepted, from the complication of Greek and oriental. Our emphasis has been from the Roman point of view, has been to show that Rome could not submerge her eastern conquests; but it was inevitable that she should affect them. She could not quench their national personalities and did not attempt to, but she did force them into paths that were the Roman order and held them there so long that when the force was gone the habit of the path remained.

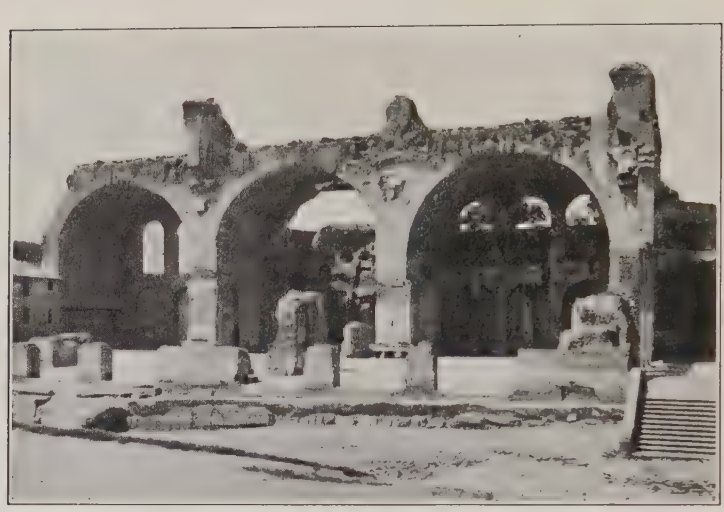
The Roman empire in the east became the Greek empire, became Byzantium, but it never altogether lost the name of Rome, never completely deserted the Roman law, endured partly because it had absorbed some engineering principles from Rome. Yet what was absorbed from Rome was reformulated by the Greeks and emotionalized by the more distant Asia. It was one of the contradictions of progressive time that Greece which had fought off Asia should turn to Asia; that Greece whose first virile expression had set a standard by which the west might live and which the east never could understand, should pass on the new ideal which was from the east, and that in the end she should become more truly bound to east than west.

The building of Constantinople had brought new strength, new commerce, new wealth. With the collapse of Rome the Greek spirit shook off its shackles, discovered new creative power, found the possibilities of new expression. In spite of the Christian ideal it was the expression of more than maturity, almost of disillusionment. The ideal became but another form, vaguer, emotional, tinctured with all the possibilities of the complication of centuries, but while the expression lasted it was surpassing in its interest, significant in its innate beauty and significant in its reaction on the younger, full-blooded, excited west. The Greek empire was the Roman power, transplanted, diminished, formalized, but it remained the unbroken Roman power; it had received the east and become almost a part of the east, but it remained the bulwark which protected Europe from the aggression of the east. It was a stronger force in history than history often credits; its gathered expression was a great example from which the west might learn some craftsmanship of beauty.

As we sum up the Roman possibilities for expression, we can find no steady progress in any direction, no climax, no unity of ideal. Rome nowhere reached a summit; indeed, if we should trace a curve, Rome's place would be among the uncombined elements in the hollow between two summits. The intellectual definition of Greece had fixed the statement of form as an expression of the reason, that should endure for all time. The spiritual aspiration of Gothic Europe was destined to do as much for form as an expression of the intangible. Greece carried definition to the limits of the definite and, without her articulated structure in all manner of expression, the Gothic would have lacked the foundation which might be infused with spirit. Rome was the transition. Her manipulation so blunted the ideal of form as essential intellect that it lost completeness and was opened to the possibility of the new infusion. This was but a negative reaction, the reduction of the structure to its old elements so that they might be rearticulated in combination with the new. And yet, when the new structure rose, something real from Rome was in it and, later, when even the new ideal had failed, men turned back to Rome again seeking relief from the tense strain of attempting the ideal. Greece and the Gothic Europe expressed two of the most immense struggles toward the best that humanity could argue or feel, and in the struggle all life was correlated into a unity of desire for the best. Humanity could not have maintained the pressure. The first ideal could not have moved forward to the second without the complexity that came with the relaxation. The physical collective power of Rome was necessary for the development of the future and the ineptness of Rome's expression was a natural corollary of her physical point of view, was more human, on the average, than the concentration of either Greek or Gothic.

There was a real, if minor, significance in the scattered Roman statement, or rather, there was more than one significance. Rome collected all the pagan and drew from it everything that might appeal to wealth and power—kept it external, did not let it interfere with life or action, did not strain to fathom what she knew was impossible to her nature. She was a connoisseur, lacking indeed discrimination, but avid in acquisition. And all she gathered was the embellishment of the Rome that melted with the failure of physical power. It was the most obvious and the least worthy of her phases of expression. Already there was decline and loss of interest when the Christian ideal demanded unity and foraged among the imperial trappings for forms that might symbolize itself. Almost immediately the Christian transmuted the significance of the pagan and the survival of Rome's collections was but meager in the progress toward the future. Its vitality of interest for us was in the Renaissance revival, was in the imposition upon the present of the pagan incoherence as an ideal of statement, simply because it had once been Roman. The Christian expression separated with the empire; never attained even the semblance of completion in the west while Rome lived, but reached one isolated summit of more than secondary excellence in the east before all culture stiffened there to a formula as rigid as that of Egypt. All the varying currents of necessity interacted. Christian had grown through pagan and both, so far as they were Roman, were founded on that real engineering faculty which Rome would not have classed among expression at all, which she hid as the rough mechanics, as the unworthy support for the formulated surface she called art.

Rome remained material, founded her conceptions on hard facts. She had no imagination that could create images, no sense that recognized essential beauty, no discrimination that could separate beauty from ostentation. And yet, as she collected the elements of complication, she became ashamed of facts and clothed them with the borrowed forms she could not motivate. She became splendid and she was satisfied, but it was the splendor that evaporated and it was the fact of action in its strength of handling that, transcending all expression, lived into the future as the true significance of Rome's existence.



CHAPTER VII

ROMAN ARCHITECTURE

THE Roman fact of Roman architecture was in stability of structure dissociate from form and from any defined structural system. It was the stability of rigidity, of inertia—of concrete. Rome realized the possibilities of this material and made its employment general throughout the empire. That she should do so was characteristic, and there was nothing better for her engineering purposes. It was cheap in itself and in the unskilled labor which could handle it; it was flexible—plastic—and might be turned to many uses; above all, it was solid. Form was not inherent in it, but any form might be modeled from it by pouring it into the desired mould. It had the strength which Rome respected, a strength that might underlie any shaping that Rome fancied. To Rome herself it was not architecture; it was the core over which the architecture—an external thing—might be applied. In its very fundamental, Rome deserted the architectural ideal of Greece. The unity of form and structure, of form and meaning, ceased to exist.

What was evident in the sculpture was here a blatant declaration of the superficiality of the Roman conception, of the inevitable duality of architectural purpose when the creative imagination, when even the simplest logic of form, had ceased to guide construction. Roman architecture was made in the manner of a picture; was as much form for its own sake spread over a foreign groundwork as is the form wrought by pigment on a canvas, but what is necessary in the painting is not necessary and may be contradictory in the architecture. In the Roman usage it brought definite degradation. The essentially pictorial covering of a structural core by a more precious and decorative material, while it can never approach the intellectual unity of the Greek, may produce results of real significance so long as there is a relationship of meaning between core and surface, so long as the surface makes clear that it is superficial and declares the logic of the structure which it covers. This was not true of Roman architecture while it remained Roman. Decorative form and fundamental structure were not related and did not stand together to state any unity of conception, but there was a form among those that Rome collected—the arch—which contained the possibilities of structural complication far more varied than had as yet existed and which was destined to free its thrusting powers from the inert Roman masses and, reacting on the Roman power for stability, to become the final structural weapon of the Christian ideal.

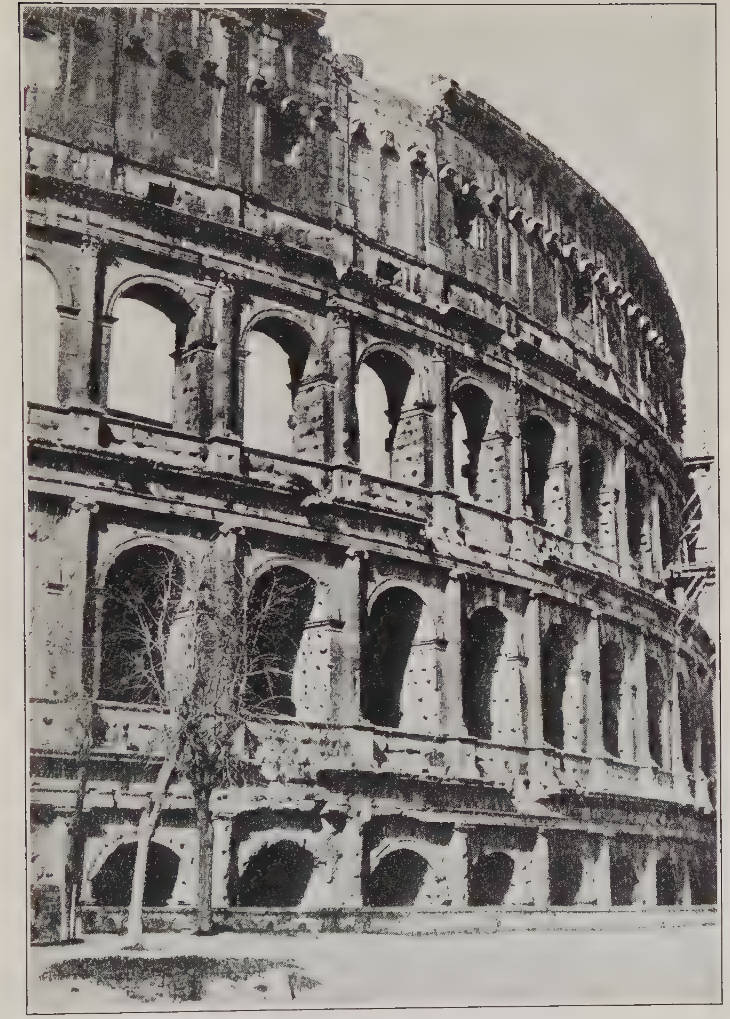
The action of an arch on the rest of the structure which contains it is very different from the perpendicular deadweight of a lintel. The pressure exerted on the center is transmitted downward, through the curves, toward the points from which the arch springs and there works side-ways, so that, if sufficient strength is lacking above the points of spring, the ends of the arch will push away and the whole structure will collapse. The thrusts of an arch must be held in place by sufficient weight of wall to steady them, or they must be balanced by the counter-thrusts of other arches. As the freedom of the form increases, an entire structure can become a framework of active forces mutually checking one another. The Roman scheme did not accomplish this, but it did suggest it to the future. The Roman builders evidently feared the disintegrating power of active thrusts and the solid masses in which the arched form usually was impressed, even when it was complicated into domes and vaults, produced little pressure that was not vertical. Yet the great vaulted ceilings which were set upon the walls certainly appeared to concentrate all their push at the four corners of the vault and, back of that appearance, the western future found its problem and finally its solution.

The plasticity of form in the inert concrete ceilings and the great spaces which they might be made to cover permitted the development of a far more complicated plan. The Egyptians had stretched their temples along an indefinite central axis; the Greeks had concentrated on the perfection, external and internal, of what was hardly more than a single room; it was left to Rome to work out the combination, under one roof, of the most varied apartments and communications. Rome passed here from the simple fact of stability to the complex arrangement that was permitted by the means to gain stability, just as she had passed from the facts of simple action to the great patchwork of the empire which was controlled by the power over action. It is not a parable to say so, because both developments—of plan through the stability of structure, of empire through the stability of action—were the results of Rome's innate engineering competence.

We shall find these Roman things, or some of them, underlying almost all the phases of her architecture. We shall see them complicating as the influences which swept across the Roman culture were complicated; we shall find them put to comparatively noble uses and to certainly degraded ones. As we visualize the externals which Rome fashioned from her borrowing, we might be led to ignore these fundamentals as Rome desired to do, but in ignoring them we should lose the living contact with the future that was immediate to Rome. It was through the reaction of the truly Roman qualities in the architecture that the Gothic gradually created a new order—an architectural expression of the new ideal—from the old elements of the Greek. The emergence of the active arch through the Roman stability and from among the gathered incoherence of forms, paralleled the emergence of the Christian ideal itself through the Roman order and from among all the gathered incoherence of the pagan mind.

It is probable that the first conceptual architectural form came to Rome with the Etruscan culture and that Rome then, almost at the beginning of her growth, learned to use the arch. The old systems of Assyria and Babylon had employed it; the Egyptians and the Greeks evidently had known it although they disregarded it in their work; the Etruscans had developed it to a considerable extent, but it was Rome who made patent some of the real variety of its uses, in spite of the rigidity of the core material, which rigidity she increased as she complicated the structure. That Rome's early applications of the arch were supremely practical is evinced by the ancient sewers that still remain, by the great arcades of the aqueducts, by the bridges. It was an engineering instrument with a flexibility beyond that of the lintel, with a far greater span and, under the Roman method, with as complete stability. It was seized upon by Rome as an engineering instrument rather than as an architectural one, but once incorporated into the Roman structural vocabulary, it passed without discrimination into the architectural vocabulary and became a disturbing factor in the Roman attempt to graft Greek form over the Etruscan element and on the engineering core.

The so-called arch order was one of the most characteristic Roman manipulations of form and illustrated the indifference to any innate meaning of form. Versions of the Greek orders were among the stock-in-trade of the Roman architects; the Etruscan arch was added to the collection. Rome considered them all on the same plane and did not visualize the essential structural distinction between arch and lintel. She desired to combine them and she set the arch with its supports beneath the lintel and within the columns which upheld the lintel. It was exactly the combination which we described in the first chapter to show what inconsistencies may develop when structural forms are used as ornament alone, and this Roman combination was so admired—it has a rich pictorial effect—that its use became extensive, that it was reproduced in the Renaissance acceptance of Roman combinations, that it was incorporated into the formula which is part of the architectural surface of today. Almost throughout the classical Roman epoch—the earlier and more productive imperial period—the arch, considered as a decorative form, was associated with the column as subservient to the lintel. Only where it was impressed into the great surfaces of the roofs and ceilings and where no decorative surface could hide the magnitude of its span, was it used in its logical relation to the evident supports; and only very gradually, as the centuries dimmed the lingering incoherent classicism of the Greek suggestion, did the meaningless combination of the arch-order give place to a more reasoned relationship where the lintel was discarded and where the arch sprang with a certain freedom from above the column; where it began to assume—perhaps with the new impulse that stirred with

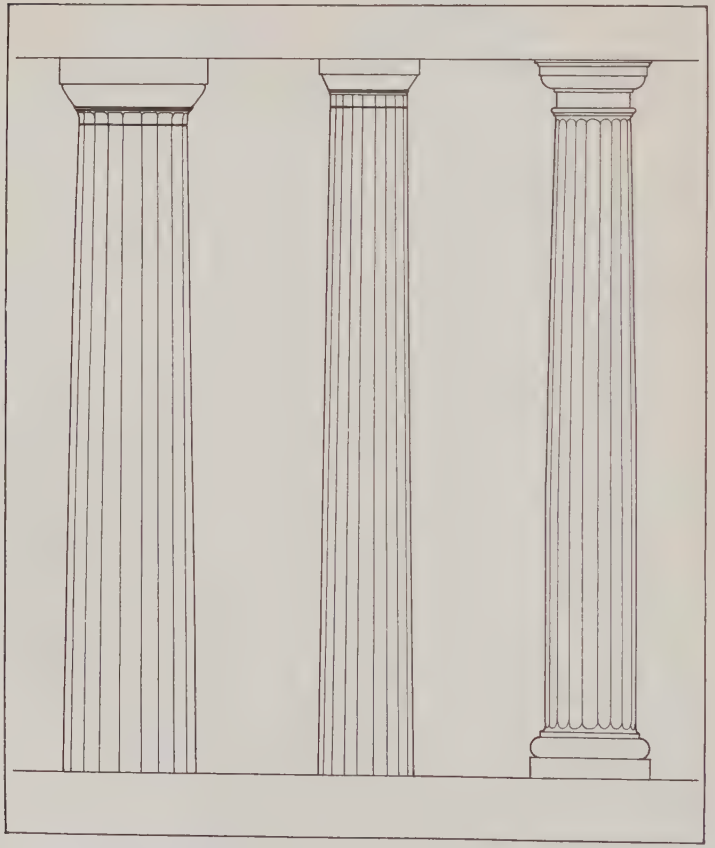


ARCH ORDER OF THE COLOSSEUM

the coming of the new ideal—an ordered usage that connected its expression with the Christian future rather than with the past of Rome.

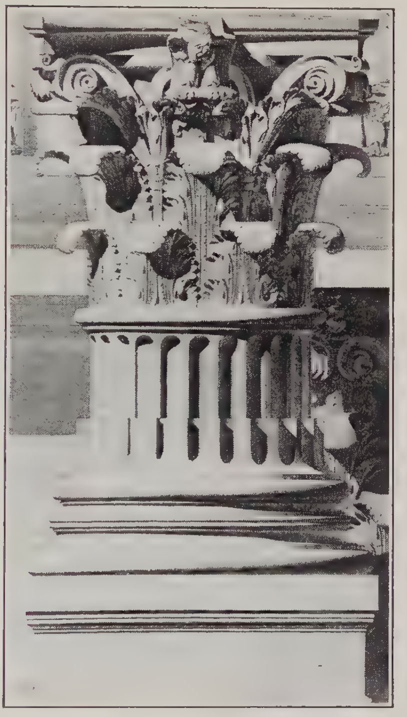
And the definitely formulated inconsistency of the arch-order was but one example of the all-pervading inconsistency throughout the architectural covering. Form which possessed structural meaning was constantly used with the meaning ignored or contradicted. Columns were set against walls for the mere sake of decoration, were built partly into walls, were flattened into the rectangular strips we call pilasters. Such things again are not necessarily falsifications of structural truth for they may be proper symbols indicating increased strength at some crucial point of wall, but they are usually superficial and Rome's employment of them was eminently so. Her point of view toward their structural indication is evident in a treatment she invented for the lintel. In the incongruous masses of detail which she spread over the concrete fundamentals, all forms—columns, arches, lintels—were considered as but decorative modeling of the wall-surface and the lintels often became mere parts of wall, were broken into several stones in the single stretch from one apparent support to the next, were kept back of the column face and bent around, above the columns, in projecting blocks which were all that the columns upheld and which, in turn, upheld nothing. These structural instruments whose shapes had been evolved during centuries of experiment so that they should express their usage, became no more significant than the slabs of precious marble, than the modeled and painted stucco with which they were associated and into which they merged. From a point of view which arbitrarily disregards all architectural fitness there is often richness of pictorial effect in the conglomerations, even a certain sumptuous beauty of line and mass, but if we look upon them as things which fundamentally are structure, or at least expressions of structure, then immediately their false conception is apparent. The truth is not only covered, it is denied.

The details of the forms themselves have sometimes a unity that is more consistent and a relationship with their Greek heritage whose historical development can be traced. We have noticed that the Greek Doric in its essential significance stopped with the relaxation of the intellectual ideal. The shaft became too slender and too straight, the capital hardly more than a flat bevel against the plinth, all strength had been defined away. Under Roman hands it regained some strength, but with a different bias, with none of the old interrelation, with but an echo of its intellectual expression. Perhaps it also came to Rome through the Etruscans as the name of its most simple offshoot, the Tuscan order, suggests; perhaps it grew into its new form when the direct Greek influence had begun to operate; but by whatever paths it reached its final shape it continued a direct development of stone significance which might have begun in the Egyptian temple of the Sphinx. The column, now, was lifted from its relaxed grip on the floor and a moulded base, on a square plinth, was inserted; the shaft was shaped more like that of the Ionic and its upper part was cut off, by a semicircular moulding which surrounded it, to become part of the capital and to restore somewhat the diminished effectiveness of that feature. The flattened echinus was bulged into a quarter circle, the annulets under it were stiffened into one, or several, square projections, and a small crowning moulding was placed around the abacus. The entablature was reduced and simplified and, although triglyphs and metopes sometimes still formed the frieze, they had lost their old relationships, were no longer adjusted to strengthen the corners, and had become, in the Roman fashion, no more than surface decoration. The Greek Doric had been the symbol of articulated, organic life; the Roman Doric was but a series of superposed details which, with considerable strength and dignity, symbolized support. At this, the historic development of the form has stopped. As the Romans made it, after the Greek decline, it possessed the same weakness of adaptability as the Ionic, so that it could pass forward into the general architectural formula and, through the Renaissance, become our own.



DEVELOPMENT OF THE ROMAN DORIC FROM THE GREEK

The Ionic, as structure, remained essentially itself. Its forms survived without major alteration, but much of the grace and beauty which had been in the Greek was lost. What, to the Greek, had been the essential—the idea—was clouded and a Roman variant carried the system back almost to be a stone replica of its ancient eastern ancestor where spiral scrolls had been fastened around a column.

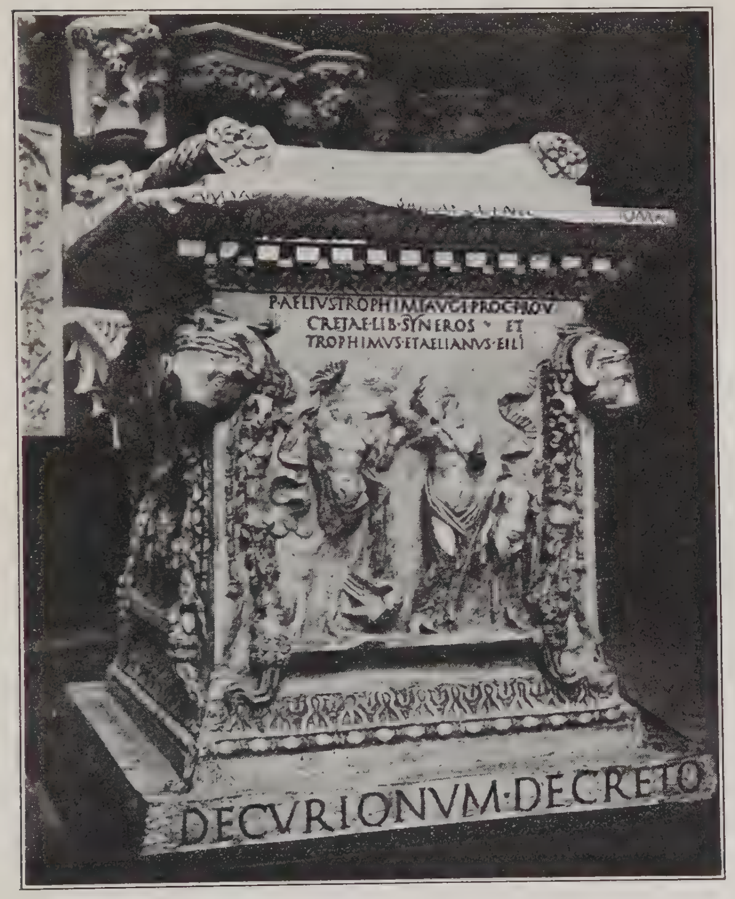


ROMAN CORINTHIAN CAPITAL AND BASE

The most characteristic Roman order was the Corinthian. This again was Greek in origin but late in date; had been almost completed by Greek hands and on Greek soil after the intellectual demand for real fitness of form to structural use had slackened. It was the most ornate, the most unintellectual of the recognized classic systems and, as such, appealed to the ostentation of the Romans, who made it what we may call their national order and, in spite of the individuality in almost every example, reduced it, in its essentials, to a formula. The shaft is taller in proportion even than that of the Ionic, the mouldings of the base are usually richer and more complicated, but the capital has the greatest divergence from the other orders for which the Greeks were primarily responsible. The echinus is replaced by a high inverted bell which supports the abacus and is not unlike the flower-shaped cap of Egypt in its arrangement of scrolls and leaves against a core, the lines of which continue those of the column. The sides of the abacus are hollowed into curves and the four blunt corners project like horns to be upheld by small volutes and supporting leaf-forms. Below this, the two circlets of acanthus leaves around the bell spring from a moulding at the necking and are so spaced that the midribs of the taller and inner row show between the edges of the others, and so that one rib is on the central axis of the column. The leaves lie flat against the bell until, near their tops, they curve gracefully, bending their points outward and down. The upward shoot of the shaft is continued through the capital, diminishing in its emphasis as the leaves, one row after the other, retard and then bend back the springing line until only the corner volutes under the horns of the abacus carry the final push against the horizontal block. There is here none of the fundamental stony quality of the Doric. The frank but conventional rendering of natural forms makes the expression less truly architectural. The superstructure is similar to that of the Ionic with the addition in many cases of another course of supporting blocks, projecting scroll-like forms—modillions —spaced evenly above the dentils to uphold the fascia of the cornice.

There were other Roman orders, complications of these major systems, which exaggerated luxury, piled ostentation on ignorance and expressed the vulgarity that may lie in wealth. They were a far cry from the Greek adjustments. That what the Greek had made his own he had perfected, Rome could not understand and all the Roman forms which had generated from the Greek would have been disclaimed by the older Greeks in disgust, not only at their falsehood and their inconsistency, but at the obvious mechanical precision and labored richness, at the blatant attempt to produce effects, which was present often in the Roman orders and in the Roman mouldings.

The mechanical quality also controlled proportion. We saw, when we noted the subtle symmetry of the Greeks,

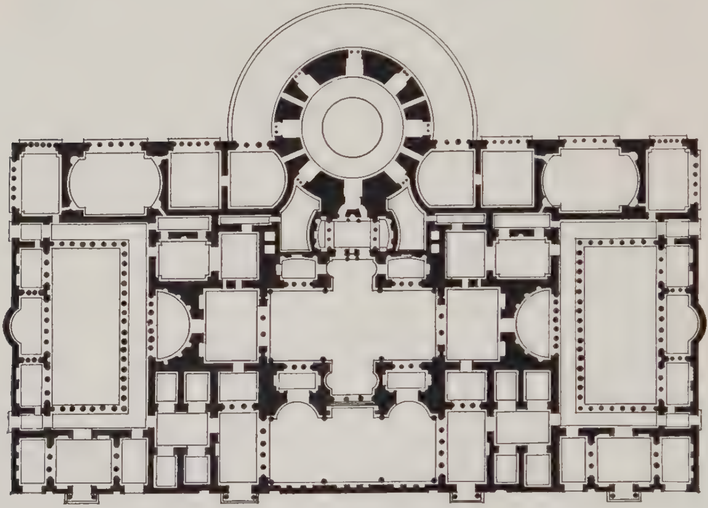


ALTAR, SHOWING ROMAN MOULDINGS AND DECORATION how Vitruvius, following the Roman tradition of their methods, mistakenly ascribed to them systems in which a simple line, usually the measure of the lower diameter of the column, was made to proportion all the combination into heights and widths which were multiplications or simple fractions of this one length. This was the Roman scheme and has become our own. Gone are all the subtle ratios of the Parthenon and in their places an evident mathematical summation, an indefinite repetition. What the Greeks had realized as a fundamental aid to vision and had perfected in all its subtle responsiveness, the Romans hardened and, in their practical minds, congratulated themselves on their achievement. Indeed, the Romans, no matter with what well-instructed admiration they may have looked back to the best work of the Greeks and in spite of the contempt which the old Greeks would have had for them, vastly preferred their own interpretations to the masterpieces they purported to resemble. The Parthenon would have been completely out of place in Rome and, likely, would have been rebuilt and "modernized."

We cannot linger to detail all the types of structure which Rome devised to fill the needs of her complication. The temples which contained her gods, the triumphal arches which celebrated the victories of her emperors, the immense palaces which housed their splendor, the circuses and amphitheatres within which were staged the spectacles to keep the populace amused, all were expressions of the pagan Rome that was to die; their realization had little place in the development which continued after the physical power had succumbed and they would have ceased to function for the future, except as curiosities amid their ruin, just as did the towering tenements and squalid narrow streets, had not the excited imaginations of a later age seen in them fit guides for their own endeavor. It is an interesting fact and one which later we shall find significant, that it was, in part, the influence scattered by the final fall of Roman power—by the late crumbling of the empire in the east—which turned back men's minds to copy the pagan monuments in the west where, for a thousand years, building on what was fundamentally great in Rome's accomplishment—on the hints from her structural stability—architecture had advanced very far beyond the lessons Rome had taught. The ghosts of these pagan Roman buildings were destined to stunt some continued flower of the Christian development which Rome's best influence had started.

Because of this it has been necessary that we should understand the point of view of their creation, which has been handed on to us. There were, however, among them, types which from the predominance of the Roman engineering power, from some real fitness to their use—to their direct expression—or from some accident of history which carried their usage into the future, remained steadily productive beyond their pagan significance, outlived the inconsistency of their original conceptions, became germs of architectural accomplishment beyond themselves. More than this, there were in the pagan combinations some principles which were worthy to continue but which the contradiction of events decreed should cease to operate, should fall into oblivion with the orders and should only reappear in the distant future when, with the Renaissance, the complication and luxury of living became again comparable to the life of Rome.

Such was the case with the complex and articulated plans that we have mentioned. The actual uses which had made them necessary to the Romans, and had therefore led to their invention, did not continue into the barbarian existence which followed the fall of Rome. Society had taken a new complexion, had neither the power nor the wealth immediately for great constructions, had not the education to make use of them in the Roman manner. The huge public baths are perhaps the best example of the thing we mean. As life had become luxurious, these had grown to be centers for the people and had included, besides all the functions of the bath itself—hot rooms and cold rooms and steam rooms and broad pools for swimming—many other allurements to attract the citizens.

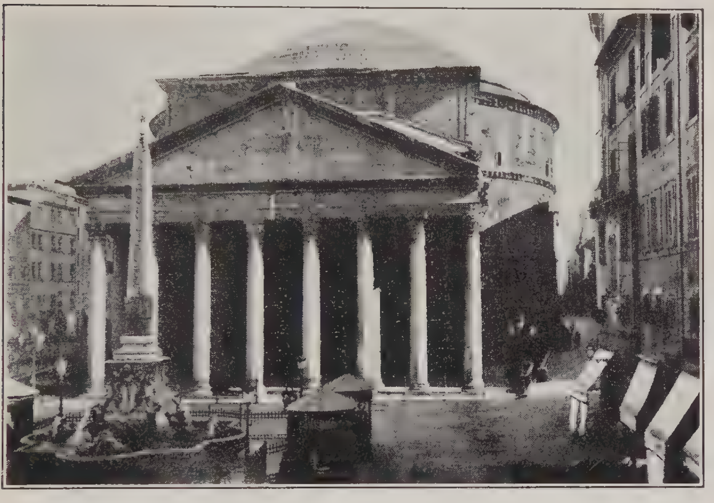


PLAN OF THE BATHS OF CARACALLA

There were halls for conversation, libraries and exercising grounds, together with all the minor functions of a pampered daily living. Now if these many things were to be combined into one building and if they were to be so placed that they could be easily accessible one from another, as well as so obvious in their position that they could be found, in all their intricacy, without confusion, a great deal of practical thinking was necessary. The plans of these vast groups of chambers and passages show remarkable ingenuity and balance; the manner in which the importance of one feature or another is emphasized indicates an appreciation of values, a constructive skill in design, where the utilitarian necessity of convenience was predominant, that was far more worthy than the architectural inconsistency which covered the elevations. These plans and the engineering cores which soared above them contained the possibility of greatness. Directly, they did not continue and only reappeared with the recrudescence of the architectural inconsistency, but on a smaller scale and on a different plane the power which invented them remained in operation.

Rome developed buildings to house the functioning of her law and included in them the facilities for more general congregation. These were the basilicas. The word was Greek but the type in its completion was due to Rome and it was the legal use which reacted on the Roman power to plan and fixed the form so that it became of service to the future. The characteristic basilica of the empire was a great hall divided into three aisles by colonnades or arcades, the central aisle being both wider and higher than those which flanked it so that its walls might project above their roofs and might be pierced by windows. This is a feature which is called the clerestory and which became of importance in the later development from this type. At one end of the building, sometimes at both ends, there was a semicircular projection roofed by a half-dome —the apse—whose future elaboration also carried forward to structural discovery. In the Roman buildings its floor was raised somewhat above the general floor and was shut away by low screens called, in Latin, "cancelli." Here was the sitting of the Roman court. An altar occupied the center and around the curved outer wall were seats for the lesser officials on either side of the thronelike chair for the magistrate himself. Whatever of extravagance the enclosing walls displayed—and they were characteristically Roman in their detail—there was in this arrangement a simple and dignified adaptation to the conventions of legal practice. Even so, it could not attract our special interest had it not been that the Christian Church in its new-found power, in its new-found coincidence with the mechanics of the empire, found here the arrangement it desired for its own ritual, settled itself into the actual ancient buildings and carried their scheme forward to be the basis of the expression of the new ideal.

The development of Christian architecture in the west—beyond the gap of the Roman debacle—continued from the basilica. In the east it followed, without the gap, the suggestion from another Roman type that had been long in use. Rome not only put the semicircle in the air, but she made use of the circle on the ground, and buildings—temples—round in plan seem to have been as traditional with her as were those which were rectangular. Examples still exist at Rome and at Tivoli, near by, circular walls surrounded by Corinthian colonnades. The upper parts are gone, but whether these were domed or not, the dome became the recognized roof for such constructions. The Roman method of casting a dome in concrete made possible its use without essential thickening of the lower wall which supported it and the most complete survivor of imperial glory in the city itself, the Pantheon, belongs to this class, although it has no peristyle and although the construction of its dome was unusual in that it contained a frame of interacting arches. There has been much discussion as to the function of this building; perhaps it was a temple, perhaps part of a great system of baths, but we have nothing finer that pagan Rome accomplished and, in its present isolation, there is a simplicity of mass which dwarfs the inconsistency of applied detail. A deep Corinthian portico, crowned by a pediment, opens into the single rounded hall where the heavy walls are lightened in effect by niches and screen colonnades. Above, the great dome—a flattened curve against the sky, a semicircle on the inside where its full sweep is made evident—continues the walls and rises unbroken to an open eye at the summit, through which light is shed into the building. During the centuries, much of the decoration has vanished and it may be that we see the building now more dignified, more the expression of the underlying Roman genius than Rome intended or desired. Certainly, to us, it is a landmark in her architectural accomplishment and was worthy to stand midway in the development from which the eastern Church created an even greater worthiness.



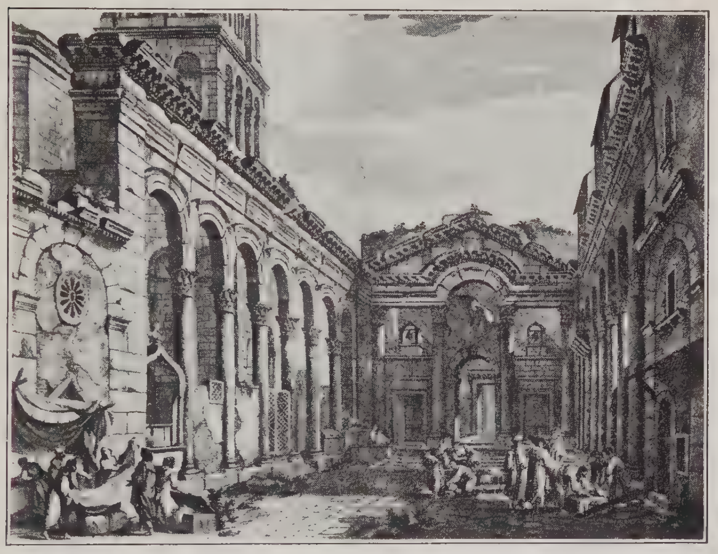
THE PANTHEON

So far we have considered only the expression of the pagan Rome, of the borrowed motives overlaying the strength of fact and will that was in the Roman power to build. The situation was very different from anything preceding it, could not have been otherwise. Greece had reached perfection in the architectural ideal she had made her own. Rome, without an architectural ideal, tried her hand at almost all the problems which the future was to solve and, where her own constructive ability could act, she made real progress, helped the future on its way, but nowhere brought complete solution. In the many types of building which filled the city and were scattered in profusion throughout the empire, no one type stands out predominant. There was no rival, no possible successor to the Parthenon. Nowhere do we find a combined working actuated by clear purpose. Style fluctuated with the changing desires and the history of what Rome herself considered the Roman architecture followed the steady decline of the physical pagan power.

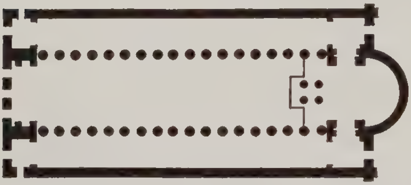
And the architecture, as Rome saw it, was not in the Roman fundamentals of its instruments; only became so in their combination. The expression was never subtle; rested its case with a brutal frankness on the ostentation which Rome considered art. There would be no gain for our analysis in reiteration of these qualities except to point out that in Rome's case they were inevitable, were founded on all the past and on the conditions of Rome's existence which her character had concentrated, while in their reëstablishment by the Renaissance no such inevitability was present. What was a natural growth for Rome was an arbitrary imposition by the later age. For Rome, the historical expression was true, was built on fact and remained consistent in its inconsistency; for the Renaissance the expression was invented and remained a pose, no matter how great the enthusiasm which directed it. These things we must remember because of their final application to ourselves. Rome built upon the ability of others than herself; her legacy to the future from her pagan embellishment was founded in the will to copy without the power to discriminate between her models and without the imagination to mould copy to new meaning.

During the first three centuries of our era the luxury of this pagan expression ran out its course and had almost ceased among the turmoil of the political confusion when the Emperor Constantine brought a new physical unity to the empire, acknowledged the sovereignty of Christianity, and predicated the final separation between east and west.

Roman expression, almost from this moment, merged into Christian expression or, more accurately, was supplanted by Christian expression. There was no startling break in form, but it was the Church now which made decision of what was worthy or useful and wrought the combinations it desired from the viewpoint of the spiritual unity it proclaimed. It is significant that as the pagan forms had become ever more degraded and confused, as they had lost even the external beauty of workmanship, some logic had pervaded the combinations. The arch ac-



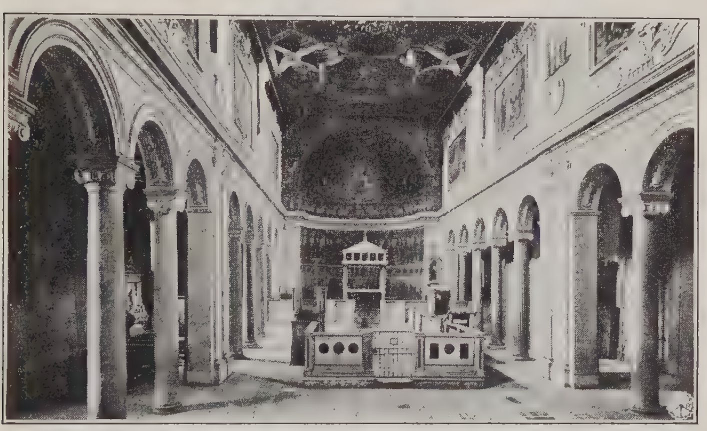
ARCADE IN THE PALACE OF DIOCLETIAN AT SPALATO tually had begun to assert its function, the structural relationships of the instruments had gathered some coherence as their profusion lessened. The Roman forces which were to carry forward had become more apparent as poverty stripped the luxury from their surfaces and almost seem to have gathered some of the order which the Greek half of the empire was destined finally to reëstablish. It is possible that this new Greek influence—a certain return of the old intellectual power over form—was acting universally, if subconsciously, throughout the expression of the empire before it came openly in the train of the religion whose dogma it had helped to formulate. Certainly this Greek power was always in the expression which the Church created, but the unity of that expression was shortlived. The empire split, its interests clashed, its architecture followed the divergent paths of east and west.



PLAN OF A TYPICAL CHRISTIAN BASILICA

It is necessary to make a clear distinction here because the future was completely separate in the results which developed from this divergence, but, for the moment, it would be misleading to forget all the interactions which continued until the fall of western Rome and indeed thereafter sporadically for many centuries. Both east and west built upon the suggestions from Rome's stability of construction, but, broadly speaking, as we have said, the east drew its inspiration from the dome, the west from the basilica.

Now, the bishop seated himself within the apse where once the magistrate had been, with the lesser clergy on the bench at either hand, isolated by the screen from which comes our word chancel and before the altar which they faced, where sacrifice had once been made to Jupiter or Mars, was now celebrated the worship of the Christian God. Time, as it changed the ritual of this worship, increased the complications of its material expression, but the basilican type remained almost unchanged even as new buildings rose beside the originally pagan ones which Christianity had commandeered. Some additions naturally were made. An outer wall or group of buildings usually enclosed the space before the western front whence, through a portico, three doors led into the column-separated hall of the sacred edifice itself, a reminder, although without historical connection, of the old axial development of the Egyptian temple. Externally there were few attractions. The early Christian basilicas were erected at a time when the wealth of the empire had already melted, and the simple brick walls, often unfortunate in proportion, gave little indication of the richness within, stripped in many cases from some pagan structure. The Church, in power, had ceased to regard tolerance as a virtue and had turned destroyer.



BASILICA OF S. CLEMENTE, ROME

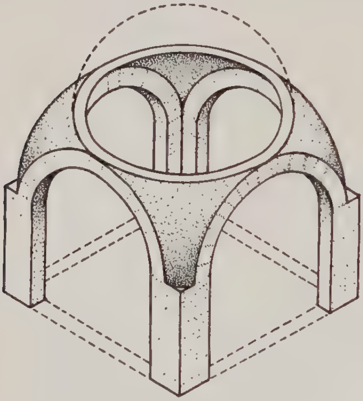
At this point we must leave the growth of western Christian architecture. Under the virile impulse from the barbarian blood that was to come it achieved the great expression of the new ideal; under the remains of Roman influence it had realized no more than the establishment of an increased order among the old environment. Rome was too weakened to create new architectural systems, as she was too weakened to grasp all the advantages of the new unity that was in the Christian ideal. All the surviving creative power remained with the Greek race which now, under the Roman name, was freed from the Roman power and was embarking on its last experiment in civilization.

THE architecture of the eastern empire—Byzantine architecture—stands usually on the pages of history as a unit of development distinct from Rome. So to consider it, however, is to separate it from its heredity. It is true that any growing impulse from Rome was over, that the new orderliness came from Greek minds and from Greek hands and that it was accomplished in the Greek lands, but it was an orderliness which was wrought from the old Roman inconsistency, which carried onward Rome's structural suggestion, which continued the Roman method of rough cores overlaid with a more beautiful architectural surface. There was no historical break in the events of construction and the new order had begun to assert itself throughout the empire before the dissolution of the western half. The Roman genius was mingled with the Greek although the Greek was master, but it was not the old Greek, nor yet the softened pagan Greek of the earlier Roman periods. The new impulse came from the Greece which had met the east and accepted eastern thoughts, which had spread over eastern territory and learned to understand the new ideal that had germinated in the east, which had adopted the ideal and formulated it. The Greece of the Byzantines was a Christian Greece, disillusioned from its ideal of intellect, but persisting in,—or renewing,—in spite of all, its intellectual power over form.

We can realize this immediately we contrast the Byzantine encrusted architecture against the older Roman, for again Greece had wrought a unity. The fundamental facts of core and covering remained, but they were created with a single purpose, to express one thing. Neither was dominant. Structure was shaped for the best advantage of the covering and the covering was arranged to conceal no working of the structure. Forms which might have a constructive meaning never were made mere decoration, but accomplished the purposes of their designs, and both structure and decoration had taken on a new effectiveness beyond the increased order of unity.

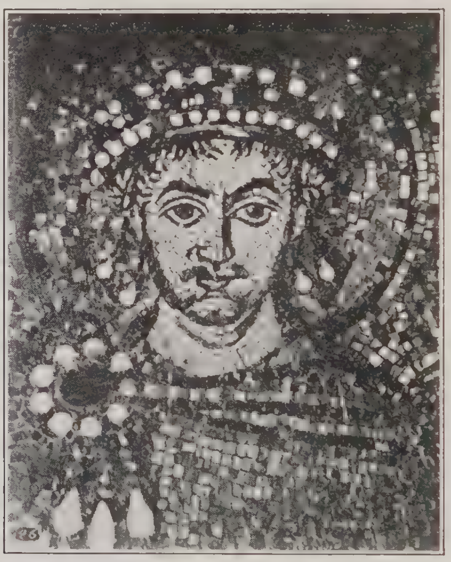
The development of the dome on unbroken circular walls could not have progressed further perhaps than its accomplishment in the Pantheon. The problem which grew from it solved the difficulties of placing a circular dome on a square building. It had been attacked in Rome itself. In the ten-sided cupola of the so-called temple of Minerva Medica, nearly three centuries later than the Pantheon, there was a suggestion of it, and definite progress was evident in the church of San Vitale in Ravenna, but this was so nearly contemporary with the complete solution that we must look elsewhere for the progressive steps in the experiment. Such of them as still exist are in a group of churches in central Syria, a province of the east. It was Greece at work again, the new Greece of the duality of intellect and instinct, but in this constructive progress, developing the engineering hints from Rome, we can almost see the reasoned mind of old Greece in its power of definition.

More structural ingenuity perhaps was needed to meet this problem than had hitherto been called upon. The circle of the dome, touching the four sides of a square, left great discrepancies and the clumsy ways in which these openings at first were filled and the very moderate gains with each new attempt to find a stable and smooth transition, evinced the difficulties; yet, once solved, the conclusion showed itself inevitable. In the finished form, four open arches made the square, above which rose the dome, its lower circle resting on the central point of each arch. The openings between vertical arches and horizontal circle were filled with continually warping surfaces of material that amounted to spherical triangles with their apexes turned downward, with their sides clinging along the arches, and with their inverted bases, each one a quarter circle, meeting and holding the rim of the dome, the weight of which was transmitted, through triangles and through arches, to the same corner piers from which the arches sprang. This triangular feature of transition is the pendentive and is one of the mechanical inventions which have gradually made our architectural structural vocabulary what it is today. It is a fact to be remembered that almost every new phase of expression has taken its impulse contemporary with, if not directly from, some gain in the power of construction, from some increased freedom from mechanical restrictions. The achievement of the pendentive opened enormous possibilities and with its use much of the old immobility of structure disappeared and active forces, having to be met and balanced, came into play. New Greece put life into the inert stability of Rome.


CONSTRUCTION OF PENDENTIVES

The dome on pendentives became the central structural feature of Byzantine architecture. Its expression dominated detail and the preparation for the decorative surface which was a controlling factor in the original conception, restricted detail. The arches rose from piers or columns, but the tyranny of the orders had been broken. The shafts were usually monolithic and of rich material; the capitals bulged into what might have seemed uninteresting cushions had it not been for the deeply incised and expressive carving and the broad rests which were created for the springing of the arches, making of the capitals splendid instruments to do the thing that was needed and to show their action. Beyond the supports there was little detail, almost no projection, little moulding. Every building was frame and decorative surface and the frame was flattened for the benefit of the surface, was evidently structural, but became plastic in its structure in reaction from the plastic surface. The structure was the definition of the lingering intellectual power of old Greece, but it was softened almost, in its definition, to receive all the emotional order of its surface, just as the sharpness of the intellect had been softened to meet the intangibility of the new ideal.

The surface contained all the color of the east, impassioned by the Christian faith and regulated by the Greek mind. Rome had used mosaics in her buildings, pieces of stone fitted together forming pictures, but now they were made of brilliant or deeply colored bits of glass, were spread over every possible part of the building, were made as much the essence of the building as was the structure which was formulated for them and which they respected in their expression of ideas beyond the structure. The luster of their combination covered the interiors of domes and apses and walls with reflecting light and outdid Egypt in its gorgeous tapestry of color, for what in Egypt had been merely painted walls, now had the gift of jewels. Lines of saints and processions of courtiers, groups of the Holy Family or of the imperial one, adorned the churches. The panoply of heaven, as the Byzantines imagined heaven, vied with the even more magnificent ceremony of the earthly court, and heaven remained very reminiscent of worldly things. Eastern Christianity may have had all the passion and all the faith of the ideal, but its expression did not rise far above that of the mundane life which had satisfied old Greece. And now the life, which was becoming formula, expressed itself in formula, in convention. The vitality of this last impulse to create was short-lived, but the vitality to resist became almost as that of Egypt, so that the architecture of the Byzantines, during the centuries of its repetition, remained apparently alive to offer suggestions that were, as we shall see, important to the west.



METHOD OF BYZANTINE MOSAIC

Most of the buildings of this style were comparatively small and, even in their aggregate, could not attract so much attention as we have given them, but that as all the life centers of the empire gathered in Constantinople, the church of Saint Sophia, dedicated to the Holy Wisdom of God, arose to dominate the city, and combined all the threads of structural progress, all the pomp of empire and all the confidence of Christian worship into one such mighty unity of architectural expression that nothing like it had been seen since the erection of the Parthenon. It was essentially a church yet, like the Parthenon, this Christian masterpiece had not received any of that Gothic aspiration toward hidden mysteries that the western nations were to bring with their development. Saint Sophia expresses the old Greek concept of the beauty of this life, expresses it with all the pomp and disillusionment of the eastern empire, and expresses it in the name of Christ and God, but mystery is absent from its vast interior. Procopius, the historian of the reign of the Emperor Justinian, during which time the building was erected, tells us in his description of its freshness that the dome "does not appear to rest on a solid foundation, but to cover the space beneath as though it were suspended from heaven by the fabled golden chain," and that the enclosed air is so "singularly full of light and of sunshine, you would declare that the place is not lighted by the sun from without, but that the rays are produced within itself."[1] Saint Sophia was a unique accomplishment, created to be the symbol of that royalty which symbolized the empire, rather than to be the symbol of God. With all its beauty it was a worldly church and its erection helped to drain the national resources and to make the people miserable.

The structural scheme was a departure from anything that had gone before. The manner in which the weight of the dome is balanced by the other factors of the roof and is finally transmitted to the ground shows that the forces which may abide in stone or brick were beginning to shake off their inertia and call attention to themselves as living things. In plan, the mass is square with a flattened dome, the lower edge of which is pierced by forty windows and which hangs nearly two hundred feet above the floor. The weight is partly held by four great arches and pendentives which spring from immense piers and form an inner square touching the dome, but the pressure is so much that other outlets are needed and two great half-domes fit, one the east and one the western arch, and carry off the active forces to where, below, they are distributed on heavy walls and apsidal formations until they reach the ground. This arrangement serves not only to equalize the structural thrusts, but also to create a vast nave, running the length of the building beneath an ever-lifting ceiling which

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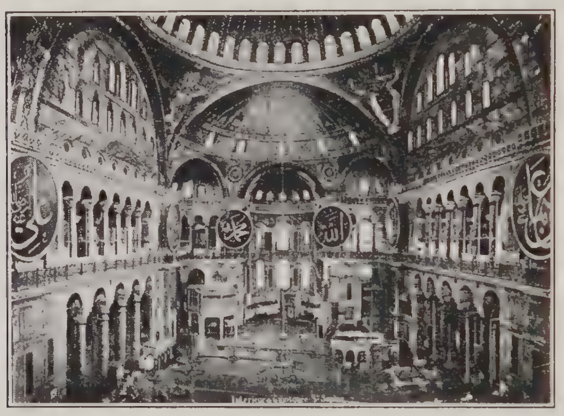
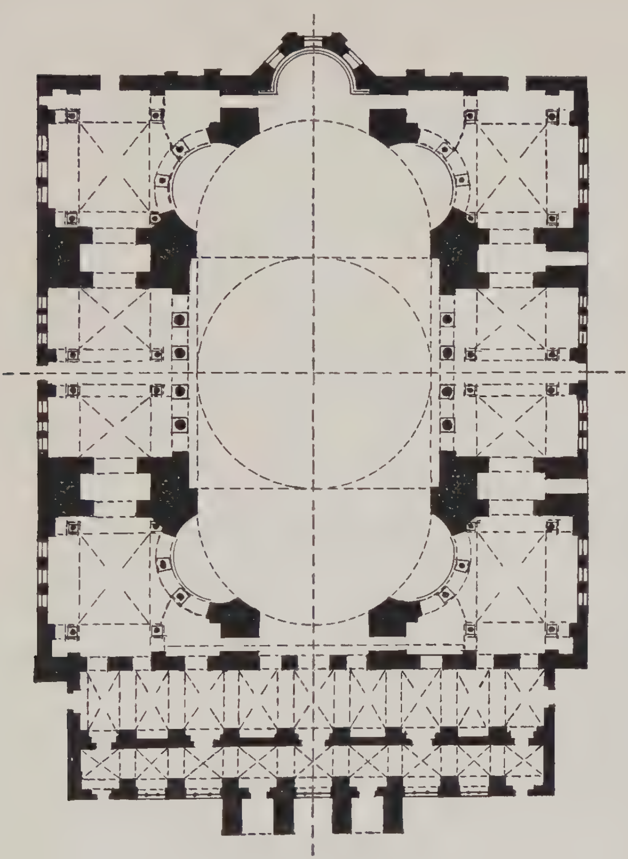
[1] Procopius, *The Buildings of Justinian,* translated by Stewart, vol. I, 1.



INTERIOR OF SAINT SOPHIA,
CONSTANTINOPLE

gave space for the unprecedented pomp of the imperial ceremonies. To north and south, instead of the half-domes, massive buttresses regulate the pressure and, as they rise among the roofs, they give a certain ungainly quality to the exterior, make it seem almost to crouch, weighted to the earth. Indeed, the great beauties of the building are



PLAN OF SAINT SOPHIA,
CONSTANTINOPLE

within, but we must realize that it never received an outer encrustation so that we cannot judge how the exterior would have appeared if some original conception had been carried through in its completeness.

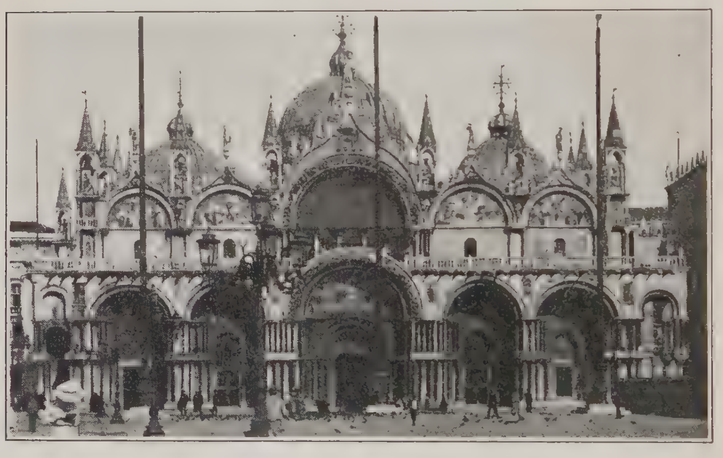
The treasures of the empire were gleaned to embellish the interior. Columns and precious marbles were plundered from the ancient temples of Asia and of Egypt and of Greece. Mosaics and colored slabs covered the walls in all the profusion of Rome, but without the inconsistency. Here, not only were the forms used as they should have been used, but they were made to show, by their juxtaposition of proportions, the real vastness of the building. The details of the columns and of the smaller arches were so placed in connection with the larger spans that those parts near the ground, the size of which may easily be compared with that of a man, make the eye instinctively appreciate the ever-increasing bigness of the upper features and even of the dome, which spans more than a hundred feet. This quality which permits a structure to show forth its true size we call scale. It is, of course, dependent on proportion and, as the complication of design increases, it becomes an important factor for good or ill, so that we must partly base our architectural judgments on whether it has been properly considered or ignored.

Saint Sophia was the last achievement in the architectural development some of whose roots were founded in the Roman power, before that development passed, in any creative sense, out of the bounds of what had been the Roman empire, and Saint Sophia was the greatest building which had been reared within the bounds of Rome. It was a magnificent expression of one phase of the Christian ideal and, as such, its position in regard to the earlier Roman work was similar to that of the later Gothic, but there was, here, a more intimate connection. The Gothic was to grow, founded in Rome's suggestion, but beyond the gap of the barbarian invasions, and to grow from the new experience in civilization, of new races. The Byzantine and its culmination in Saint Sophia had progressed directly through Rome to its own completion. The Gothic could shed the contradiction between the Christian and the pagan life because its creators were the destroyers of the pagan; the Byzantine could not forget the millenniums of pagan culture which had been more effective in the evolution of its builders than had the newly proclaimed religion of Christ.

At this point, perhaps, we leave all that we can even broadly claim as Roman architecture, but there is one other expressive building, centuries nearer to ourselves, which was more a descendant of Rome, more a connection of Saint Sophia, than it was a relation of its own contemporaries—Saint Mark's in Venice.

The face of Venice was always to the east. By tradition and in fact she had more in common with the Byzantines than with barbarian Italy. The church of Saint Mark was a slow growth, through many changes. In its final form it stands as much alone as does Saint Sophia, a packed treasure-house of the spoils from many lands and yet, in spite of all additions, its fundamental character remains Byzantine.

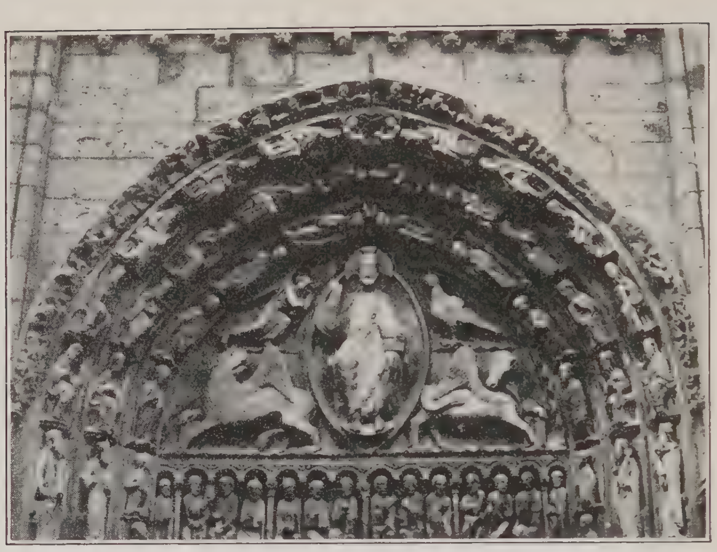
The plan is a simple cross, forming five squares, all crowned with flat domes which are separated from each other by shallow vaulted spaces. The nave runs east and west and its roof includes three domes, but the lateral axis stretches just as far and its projections on either side create a transept. Here, the definite centering of the plan breaks up all semblance of the basilican idea and fixes the attention under the central dome. There is little light and the gold grounds of the mosaics gleam among dim shadows and from corners screened away by polished columns. Saint Mark's has gathered all the mystery and all the instinct of Christianity. It speaks out such understanding of hidden things that the worshiper cannot escape an overwhelming surety of something present which his senses fail to realize. Some deity broods throughout the place, demanding homage and accepting as its due all the beauty that man can work from rich material. Here the unseen becomes almost tangible, but makes no demand upon the adorer beyond wonder and worship. There is no uplift that shall carry man's mind beyond himself, beyond the walls, into a sphere where he can believe that he, himself, is part of God.



ST. MARK'S, VENICE

Without, Saint Mark's has attained all the beauty of surface, all the luxury of decoration which was denied the church at Constantinople. The upper part is largely Gothic and the bulbous coverings which hide the Byzantine domes increase its individuality, but the mosaics and the beautiful marble slabs with which the walls are faced show the results that may be attained by the method of encrustation. It is true that the front is lined with tiers of columns, trophies which were brought from conquered cities and, although the richness of their ordered lines is superb, they do transgress the law of usefulness. To some extent the sentiment which made them symbols of the Venetian prowess offered to the city's patron saint, reduces our criticism, and the great visual harmony of the entire structure must make us view it with deep reverence.

Few thinking men can stand unmoved before the beauty of Saint Mark's, a far but clear reflection from all the striving for beauty which was in Greece and Rome; which Rome misunderstood from Greece, but passed onward to Greece again so that the Greek power over form which had defined the ideal of intellect for the past, should underlie the new expression of the future as it transcended intellect and beleaguered heaven.



CHAPTER VIII

FRANCE

ROME was engulfed. The northern barbarians possessed the west. Christianity, surviving from the Roman past, imposed itself on the barbarian soul and attempted the control of the barbarian action. This was the beginning of our own phase of complication; these barbarians were our ancestors; all their experiments in living descend to us through the perpetuation of their blood which is our own.

It is easy at this point to docket history, to say "Here is the end of the measured, self-sufficient, material pagan civilization and the beginning of a new existence, of a new point of view evolved through the development of new races." It would be easy, as we visualized the progress of this development, to insist on its separation into periods, each accomplishing its mission and passing onward to another distinct in its own achievement. On the surface, there would be truth in this insistence on periodic definition; indeed it is the culminating expression of one such period, of one such phase in the barbarian development, that we now must analyze, but if in that analysis we lose the thought of the underlying continuity of human life—of its growth and its expression—we shall lose the significance of the particular moment in which our interest centers, for we shall cut it away from the past which made it possible and from its future which has grown to be our present. The human total in the sum of evolution is after all so relatively small and so surprisingly comparable within itself that the homogeneity of development is, in the broadest sense, the fundamental fact even where we can separate into distinct races and realize vast eras of time. Our analysis has narrowed to a group of related peoples and to but little time as evolution measures time. The diversities of progress in which the human mind finds epochs may hold but the significance of passing thoughts in the total of the future, yet it is the diversity which must incite the human interest. It is the progress through diversity to further difference; it is the combination between diversities, which is the expression at least of the deeper progress, and this passage from the Roman world to the confusion which juxtaposed the still uncombined elements of what we call the modern, must remain significant, not because of the immediate and apparent break in civilization, but because of the immense possibilities it gathered for the future complication.

So much would seem to hang on this transition that it is worth our while to pause long enough to recapitulate the situation, to take stock of this seemingly bankrupt past for the benefit of the future to which, after all, it paid so high percentage. We have seen how Greece, through her own peculiar genius, created an ideal of human living—perhaps the first ideal in the history of the nations which could transcend, in its rational application, the personality of its creators, which had the possibility to become all-human and timeless. We have seen Greece foreshortened in the perspective of the centuries and it is easy to forget that she was created—on a smaller scale—almost as our own present was created. The first Greeks were the barbarian conquerors of a complication older and less united than Rome's, but one which, through a group of turbulent centuries, tried out and sifted the ideas which the further past presented. The Greek ideal evolved in the Greek mind, but from all the ideas of the older races with which that mind came in contact. The creation was from the elements of complication, but after racial consideration of these elements by Greece. Analogy can never be conclusive, but often it is illuminating toward conclusion. Our western Europe did not create the Christian ideal, but drew it from the Roman world wherein it had germinated from the combined thoughts of many peoples and many ages; had been concentrated by an example which inspired the conviction of divinity; had been formulated by Greece; had been made autocratic and militant by Rome. It is not historically comparable to the Greek ideal because it was not the creation of the new force which was to mould the future complication, but was the first great reaction of the old elements on this new force. As such—as an element toward the future of the western nations—it is comparable to the old ideas—among which were its own first eastern germs—which preceded Greece and through which the Greek ideal developed. The Christian Church was a legacy to the west from all the past and the first great expression of the west was the expression of the Church, a statement so convincing in its beauty that it stands to rank with the Greek and has perhaps the same power to become all-human and timeless on the intuitive plane which the Greek ideal possessed on the plane of reason.

We must insist, however, for the moment, on the historical contrast in the creation of the two ideals because the suggestion of the analogy continues. Greece, judging the elements which she found, in the end created. Will it follow in the later future of the barbarian nations that they also will create? Is it possible that they have begun to do so? Will the west, sifting and judging all that it has gathered from the past, from the Greek ideal of intellect and the Christian ideal of feeling, build a new and more inclusive ideal into the centuries to come? All this is immediately pertinent to our inquiry, even in the remoteness of any possibility of definition beyond conjecture, because it involves the very fundamentals of architectural expression, because the line of expression which continued in the west after the fall of Rome is still in operation and will remain so beyond ourselves, and because all the phases of this western expression have been the gropings of closely related cultural groups toward an end which even our present has not defined. Again the analogy—after the Greek ideal had been created it did not weaken, its expression did not relax until the vitality of the Greek action had worn itself out. The created ideal of life was simultaneous with the summit of the active vigor of life. The Christian ideal came to the west at the beginning of the western vigor and the unity, the intensity, the conviction of ideal expression fell away as the vigor of living took on new complexion, but with increase rather than diminution of power. The Christian ideal in its demand for inspired unity could not have been the final and fundamental ideal of the western nations, for their development has continued beyond that unity and their accomplishment has been broadened rather than restricted by the shattering of that unity.

If the suggestion in the analogy is true, the summit of the western vigor is still to be attained, to be defined, to be expressed. It is with this hope that we must look upon the phases of our own ancestral growth that lie between the Roman downfall and ourselves. It is always with this possibility in mind that we must visualize the changing architectural statement of ideal and of conviction. And if almost in the first flowering of western expression we shall find attempted a definition which, when we juxtapose its flashes of intuition beside the reasoned confidence of Greece, combines with Greece in a duality of intellect and feeling to which no more recent statement of ideal has added significant matter or beauty, it is perhaps to all the present threads of complication that we may look to trace some evidence for the conviction that before the slackening of its vigor, the west will, in its own turn, create, will reforge the ideal, will find perhaps the fundamental unity behind the duality of intellect and feeling that we know.

We shall not presume to restate the Christian ideal. As a philosophy of life it is the reaction of the human to a conviction of eternal and immutable truth—of divine fact—which in turn reacts on humanity in judgment. It presupposes all the elements of the Greek ideal but deprives the human intellect of its Greek function of ultimate definition. Christianity judges humanity not in terms of itself, but in the terms of its conception of God; its desires—in the ideal—have left the earthly plane and have centered themselves in the assurance, drawn from desire, of a life beyond the cares of earth; in an assurance dependent altogether upon the intuition for its promise. The Christian life parallels the Egyptian in its insistence on eternity, but predicates the enjoyment of futurity upon the quality of the earthly life, not upon the advantages. It has left fact to found itself in obligation.

The Christian ideal did not come to the new west in the simplicity of its intuitive statement. It came with the form of Greece and with the imperial preconceptions of Rome.

It came, not to offer the conviction of salvation, but to demand the universal acceptance of the code on which salvation depended. Itself the child of intuition, it allowed no latitude to the instinct of the individual, for it had wrought its formula and the admission of even the potentiality of question would weaken the fabric of its dominance. Before Rome fell, the Church was militant with an intolerance which contradicted Rome, and the chains it fastened on the unlettered imaginations of the barbarians were stronger than any physical force which Rome had ever brought to bear. They leveled man to a unity—physical, mental, eternal—which the Greek ideal had never demanded, a unity of obligation irrespective of worldly station, and they produced expression so unified in its massed results, so collective, so potentially coöperative in its endeavor that, until the enthusiasm of its unity relaxed, the Christian expression absorbed all the faculties of the western world. The Church was the first great civilizing factor in the western life. For centuries it was the dominant factor imposed on growth by the Roman past which was the inclusive past of all that Rome had gathered. The vitality of the Christian enthusiasm accorded with the vitality of the barbarian exuberance in the freshness of its culture and was accepted by the barbarian mind before that mind had begun to question beyond its imagination, but the Christian vitality was not from the enthusiasm of youth and contradicted the freshness of youth in the western culture. The west grew beyond the unity of the ideal before its youth entirely succumbed, but it never expressed the carefree boyish quality of Greece and even as it admitted new factors to influence the development of civilization, it could not throw aside, when it discarded the complete conviction in the ideal, the questionings which the aspiration toward the ideal had fostered.

The current of expression in the west began in the Christian Church, was at its greatest—to the present—in its interpretation of the ideal behind the Church and it was, almost in its beginnings, the culminating expression in which that ideal has flowered, but the current has passed, historically, beyond that ideal to things which the present has not yet defined. The moment which we must try to visualize was the moment of the utmost unity of the Christian faith. After that our path will lead us to face, from the reality of their expression, the facts which, beyond the unity of Christianity, have widened the possibilities of complication and which lead us through the present to what may be the more complete ideal definition of the future.

Among the races which accepted the Christian teaching there was no tolerance for unbelief once the Church had established its sovereignty. The unity of the ideal was proclaimed and was enforced. It reached the barbarian peoples at a moment in their development when its intuition, its imagination, its miracle, might bring, not understanding perhaps, but an ardor of faith which found more satisfaction in its mystery, more unthinking conviction in its divinity than would have been possible for any reasoned definition of the facts of existence and than would have been possible for these same peoples in any other stage of culture. Generally speaking, it imposed itself on every individual, became the confessed faith of every individual, whatever the idiosyncrasies of his daily action and of his personal character, but since in these barbarian conquerors there were the germs of all the human diversity which makes our present, the ideal reacted on men in different ways. Broadly, it divided the populations between the priests and the laity, between the men who found their vocation altogether in religion and those who maintained a life whose earthly aim was not religious, but whose action, if salvation were to follow, must be guided by religion. And as always, behind the evident division there was an infinite shading of action and purpose which must have negatived the categories in the understanding of the All-Seeing Divinity of Judgment which the ideal predicated; a shading from the ecstatic recluse who made himself a hermit thinking to serve his God, through the beggared monk whose service had some tincture of humanity, through the parish priest more human and more balanced, through the churchman who cloaked his worldly leanings under his religion, through the layman who excused, even to himself, his inconsistencies of action by the religious posture of his reaction, to the warrior who buried his conscience in the forgiveness of religion, to the poor peasant who observed the forms religion taught him and who lived close to the earth without thought or desire beyond the earth.

But to the mediæval mind the categories were real, were distinct, were divinely established. The Church had erected a celestial hierarchy of martyrs and saints and angels whose powers graduated through the lesser sanctities to the divine Apostles, to the infinitely divine Trinity of God Himself. The reaction of the Church erected the complementary categories of priests and laymen into earthly hierarchies. On the one side were the monks, the priests, the abbots, the bishops and the pope, who was the divine vicar of God on earth; on the other, in all the interacting obligation—and all the actual contradiction—of feudalism, were the people, the nobles, the kings, the emperor. Christianity, supplanting Rome, had conquered the conquerors of Rome and had imposed on their confusion the idea at least of the material Roman unity as the greatest earthly weapon to insure the ideal unity of faith which the Church demanded. But the pope was not content with heavenly things and the emperor would not yield to him in earthly ones. Their struggle punctuated the mediæval action with alternate divine and worldly victories in the continual skirmishing for earthly domination that accentuated the impossibility of the complete unity which was not after all essentially within the ideal, but which the leaders of the organization which had grown under the ideal declared essential. It is not unfair to make a clear distinction between the original ideal of the Christian faith in all the simplicity of conception whose beauty no dream of man has ever bettered, and the organized dogma of the mediæval Church which imposed on the simplicity confused gleanings from all the subtleties of ancient thought and instinct and which imposed on its adherents an unthinking obedience of belief and act which was foreign to the actual teaching of the Christ.

This distinction is necessary to us if we are to understand the culmination of expression in the Middle Ages. The early life of the western nations, after the first confusion, was completely formulated by the hierarchies of church and state. Real unity was not attained and such as was imposed was not maintained, but there was more nearly a realization of unity at just this time than has been found before or since. It was a unity of the fear of the unseen, of the fear of future judgment. The Church proclaimed the universal love which was the original essence of the ideal, but it added, as a coessential, a definition of inflexibly judging godhead which might have gone far to negative the love in the minds of the simple people. Fear of hell did much to create the unity of the Middle Ages, reached every man through the earthly hierarchy of religion, restrained much of the brutality of the earthly hierarchy of action. The unity remained comparative, but it was strong enough to create a passing unity of expression which was perhaps the most astonishing reaction the world has ever seen from a single organization. That this expression was filled with almost unimaginable beauty was not due, however, to the organization but to the unquenchable appeal, to the real divinity of beauty which had been the original essential. The love welled up in spite of hell, forced itself beyond the restrictions of the dogma and the hierarchies, created its own worship in the very face of organization, ignored suggestions of the frown of God and established the Virgin as its mistress, as its intercessor between itself and the inflexibility of celestial judgment. The very spirit of Christ which the Church had tempered to an avenging blade, passed onward to His Lady Mother and became the most vital power to formulate expression into beauty, became the instrument of an enthusiasm for an ideal of love which coördinated all the passing unity of organization into an outburst of unified expression that shall remain deathless in human history.

Religion insinuated itself into every phase of life and wrought those phases on which its control depended into the graduated organizations it declared divinely sanctioned. It caught the future unawares and captured the western mind before that mind began to know itself, but there were lines of thought and action which evolved and were continued behind religion and beyond the unity of religion, which in themselves were natural to the west and were accentuated by inheritance, outside religion, from the Roman world. The barbarians when they gained supremacy were at that stage of culture where their imaginations could be fired by the beauty and by the terror which the Church wielded, but they had the instincts of a practical life and they insisted on a measure of personal liberty in action. From the moment when the consciousness of individuals began to combine into the consciousness of nations a new element was born contradictory to the churchly hierarchies of religion and of state, more fundamental and more enduring. The growth was slow and long. In the first centuries the very elements of order on which the Church insisted worked also toward the concentrations which were destined to face the material power of the Church in conflict. When the nations fully awoke to the self-consciousness of nationality all pretense of material unity vanished and the unity of expression broke apart into the coördinate streams of national expressions, but there was a period of balance, hardly a century,—a passing moment as the larger history measures time,—in which a focusing of all the striving elements so wrought on the expression of the ideal, so gathered into a center of place and purpose and enthusiasm, that all the progress from past to present was held suspended while France created—no part of the ideal—but the finality of its expression. In the French people was the genius to fix the Christian statement, to make the supreme attempt to formulate the intangible. It was a task beyond any power over form that humanity has yet possessed. There was contradiction in its very essence. Even mediæval France in the almost miracle of unity she wrought between form and the fundamental formless did not define the Christian ideal, but she did define completely all man's feverish aspiration toward the ideal. Almost at the moment when the unity dissolved, when the forces of the future already battered against the immovability of the organization of the Church, France, who had been the leader in attempting material unity and had turned among the first to its destruction, halted before the hope of the ideal unity and sought, in the intense outburst of statement, an affirmation of the ideal which the progressive facts of life denied. All the result was in the attempt. The fervor, the aspiration, the hope that proclaimed assurance, remain eternal; the unity of definition is still before us.

Life could not be restricted into a single channel. It could not be kept even to a duality of religion and of action which served religion. Much action and, following, much thought, ignored religion but added fullness to life. We must reiterate the distinction between the Church and the original conception behind it. There is no action which might not be guided by the fundamental predications of Christianity, but such intangible power—the power of love alone—did not satisfy the organization which claimed control over the application of Christianity, and so material conflict was created which contradicted the Christian spirit. The final beauty of the French expression had passed beyond the dogmatic confines of the Church and was in part made possible by the very forces which were rising to combat the dominance of the Church.

Distinction has been drawn by some philosophers of history between the imaginative type of man and the practical or commercial type and it has been pointed out that the difference between them is so fundamental that it is one of kind, not of degree, not of stage in development. That is a drastic view considering the infinite gradations between the imaginative and the commercial faculties in individuals and in the nations they combine to form. If we could fix upon a man whose every reaction depended not on fact, but on his personal imaging of fact, on his distortion of fact into the reflection of his personality, a man who lived ignorant even of all trafficking, and if we could fix upon another, outside of fiction, who had no instinct beyond the hard facts of barter and of money, we could admit the absolute distinctness of the types. Proof would demand a personal knowledge intimate as that of self, combined with a judgment balanced to recognize the imagination and its opposite. It is impossible. Collectively, it is true that Rome expressed herself in action rather than image-making and that she turned to money as her standard. It is also true that the young western nations grasped the imaginative ideal of Christianity and tried to live it, that it failed them in its completeness and that they too have turned to commerce. It was all growth, however, and changing balance, not separation into types. It was commercial Rome which accepted imaginative Christianity and passed it onward to control the potentially commercial barbarians who had overrun the west in their imaginative youth. The imagination reacted on the individual according to the tendency of the individual and with the first order that was reconstructed, commercial habits were resumed and were given new direction.

It is true again that the new commerce—if it were really new—was connected with the still living Roman east and that it was seized upon most eagerly by the populations where the new blood was thinnest in the growing mixture, but its spread was rapid even to the peoples where the blood was all barbarian. France held the balance. It was she who first concentrated upon the ideal; it was she who first attempted the material unity; and it was she who first maintained a normally increasing nationality contrary to that unity, which called all the weapons of the new commerce to its aid and so broadened among her populations the potential participation in her expression. Beyond the Church and the noble caste which represented the feudal hierarchy, there grew the third estate of merchants. Wealth gave them power and gave them leisure for education which understood the springs of power. It increased the possibility for liberty of thought which might not always accept the dogmatic unity of the Church. The trading centers became cities almost independent in their wealth and always props for the concentrating nationalism which alone was their protection from the actual anarchy of the feudal hierarchy, was their guarantee of the order which commerce needed. The safety of eternity was in the Church, but the safety of earthly living was to grow with the growing earthly wealth.

The French communes and royal cities focused the new spirit of France within the unity of the ideal. From them came the greatest of the French expression and to them, by some students, has been given the final credit for this consummation. Without them certainly it never could have been fixed in its magnificence. Without their wealth, without their variety of mind, without their enthusiasm in their own liberty, without their will to undertake great ventures, the supreme expression never could have flowered. And yet, with all the cities had to give, they remained but the means, the focus of the endeavor. The ideal had come to them from beyond themselves and their aspiration toward it carried them beyond themselves. Their growth threatened the material unity which maintained the ideal unity they attempted to express; their potentialities separate from the ideal did not predicate significant expression at all. The fear of hell still drove all men to propitiate celestial justice. The earthly organization which claimed to hold the keys of heaven permitted the expenditure of wealth in the service of the Church, the expenditure of trained craftsmanship, to mitigate the rigors of eternity; men were driven by the pangs of conscience to give that they might be saved and since the cities contained the greatest variety and power of production, the coöperation of their giving became immortal in the coördination of their expression.

And there was the other side. No community controlled by Christianity—absorbed by it—could gather fear alone. Without the beauty, without the love, fear since it was based on no substantial fact would have led even sooner than it did to questionings of evidence which would have mitigated fear. The things for which the cities stood tended to break the dominance of the Church, would have made them greater factors in the struggle than they became, had not the nationality which they had fostered found their local liberty a danger to itself and crushed their spirit, later, to centuries of impotence. But at the great moment of expression there had come no articulate question even of the material dominance of the ideal and the terrible judgment of the Christian God threatened the future of every man. It did so because man permitted it to do so, and man permitted it because he had found his ideal of love in the exquisite figure of the Virgin, which, even in the desperation of his fear, he set between himself and God, to find the assuagement of all fear in the promise of forgiveness.

And so, in these French cities which gathered the most varied and the most concentrated impulses of the French people in their first self-consciousness, there arose in the twelfth and thirteenth centuries the most amazing and the most creative of French expression. It was not from all the people. The earth still claimed the masses as it had done in Egypt and Greece and Rome. Slave and serf and peasant were always chattels to which the ideal might stoop, but who could not rise to push expression nearer to its divine source. This is not a point for criticism. Growth was to bring the mass in turn to its own self-consciousness, may in the end permit the mass its own expression, to transcend the past. Christian France had not yet done so, but at this moment there was greater promise of it than the past had given and than was permitted to the future for many centuries. The unity of the ideal was for all mankind, the expression of aspiration toward it was from the devotion of all the classes of the people who might have power to express, and the quality of its enthusiastic statement came from deeper within the hearts of men than in any previous attempt to define the relationships of life.

THERE is a lesson in the fact that the ultimate expression of aspiration came, not from the organization of the

Church itself, but from the people, from that part of them at least who had become self-conscious. It would almost seem that the enthusiasm of the statement was from the vigor of the new energy that was growing with nationality and commerce, from the intensity of a new humanity suspected behind the divinity of the Church and more in tune with the inner spirit of the ideal than the Church itself. But if the vigor came from the budding liberty, the matter of action which for a period made possible the liberty, had not become articulate for self-expression. Even to the present no preponderantly economic phase of culture has wrought an ideal of living that has demanded or could produce supreme expression and, in the Middle Ages, the present economic system was in its infancy. Supreme expression—that of the Greeks and that of the Middle Ages—has been the result of a momentary combination of forces, a momentary balance between the human energy for progress which must continue despite all attempts of definition to dam its movement, between this energy and the ultimate statement of some coördinated attempt toward definition. The mediæval energy was thrusting toward results beyond the unity of the Christian ideal, toward results of which it did not have itself the least suspicion. It was become gigantic in its power to express and the only matter for expression was in the ideal it still believed divine in unity; in the ideal around which the organization of the Church had wrought a daily circumstance which made some reaction toward religion a matter of almost hourly necessity for every man, filling existence with deep symbolism for those who saw beneath the fact, weighting existence with the minutiæ of obligation whose neglect might bring damnation, for those who met the fact and did not see the symbol.

Everywhere, the Church was guiding, was proclaiming love until it saw cause to threaten, when it became terrible beyond even the refuge of extinction, for the fires of hell did not permit extinction. The only refuge was in religion, almost the only sanctioned thought beyond the animal sensations of living was in religion or tinctured by it. The energy of a rational existence and the energy of commerce were collecting for the future, but were hardly conscious of themselves under the pressure which the Church exerted over even the most practical-minded of the adventurers toward modern living. And as with the growing centralization the Church itself became established in a certain way upon a money basis, it reached into the resources of rich and poor alike, took from each man his measured toll to complicate the final judgment of divinity.

Our interest is in the concentration of expression which resulted, expression of the ideal which was to pass, intensified by the very energy which brought the passing, but energy which was still so burdened by the weight of the ideal that it must heave and try to fix a colossal statement of all the ideal meant, or stifle unrecognized, and fail the future.

Outside the Church, society had every inclination to continue predatory. It was restricted in its rapine by the threatenings of the Church and by the growing order which resulted from increased commerce and the consequent political stability. Yet war remained the avocation of a gentleman; his sword was the best promise of his fortune. Constant battle was the commonplace of life and at the bottom the Church could but acquiesce in a condition whose elements she had the willingness to turn to her own temporal advantage. The barbarians when they had conquered Europe had really been barbarians and it is not surprising that, after the few centuries permitted them for culture before their first great outburst of expression, much of the savage remained to color action. The surprising thing, rather, was in their aptitude for civilization, was in the avidity with which the barbarian nature grasped the beauty that was in the Christian teaching and applied it beyond the obligations of religion to soften the surface, at least, of action.

The codes of chivalry and of romantic love seem often artificial things as we study them in retrospect. All the mannerisms of the tourney did not prevent the killing; all the protestations of the lover might be shocked to silence by the possibility of returned affection. The courtesies of chivalry, the songs of the troubadours, did not influence the fundamental personal reactions of hate and love. They remained to some extent a pose, but it was a pose significant of the desire to beautify existence, a pose which was a human reflection of the divine love the ideal predicated. It may not have restrained the individual in the crisis of his passion, but it modified society so deeply that we feel it in the present and only in the present are we losing some of the beauty of relation which it fostered.

As in all such social manifestations, chivalry and romantic love had their excesses, their exaggerations, their hypocrisies. They shaded in their reaction from actual association with religion to a worldly silence in religious things that might seem to deny the presence of the ideal in their conception, but they all resulted from the dominance on life of Christianity. Indeed they were the expression of that dominance in its action upon the worldly existence of the feudal hierarchy. From the point of view of the ideal, the expression was restricted, but it gives a further indication of the participation of all castes among the people in the complete expression which had drawn, from just this restricted phase, a more playful finish, a more delicate insistence on pure beauty than could have come from the massed popular energy alone.

It is not advancing beyond the present point in our inquiry to state that the culmination of expression was architectural. In our analysis of the Gothic churches we shall find the totaled Christian aspiration of France so far as it was fixed in the expressive media we call art. Form in any sculptural significance, and the beauty of color were so bound to the architectural achievement that our consideration of them must remain connected with the buildings. Literature and music, interesting as they may be in their early fragments, show but beginnings, phases, tendencies; have not the scope to become collectively illuminating. All the seeking of the ideal was unified in stone form as it was unified in no other concrete manner, as it was unified in only one expression of the action, an action we must realize to understand the architecture. Centered in a French endeavor, all feudal Christian Europe proclaimed its aspiration, its conviction in the ideal, by combat against the other eastern religion which had flowered from the same ancient complication and which, as much from likeness as from contrast, had made itself the rival of the Christian.

The religion of Mohammed was a second monotheistic statement of the instinctive interpretation of relationships which had germinated in the east. It was promulgated by a prophet who did not possess Christ's intensity of love and it was not tempered by any defining power like that of Greece. In its purity it denied form, forbade all images and checked its own growth as an ideal. Remaining formless, it did not create fundamental expression of its own; depending solely on the instinct, it predicated no intellectual progress among its devotees. Islam, as Islam, had little to give the west and yet the west drew inspiration from the confrontation of the two ideals.

Christianity, working on the vigor of the barbarians, was creating new nations with a new bias of culture in western Europe. Islam, when it absorbed the east, did not change the east but concentrated it, and the east still had something left to give to the Christian west whose own ideal had been originated in eastern minds. Old forms of expression penetrated the formlessness of Mohammedanism and became the interpreters of its fanatical spirit; suggestions from old intellectual experiments were built upon in the passing glory of civilization which followed the sudden expansion of Islam. Intellectual definition was inherent in neither faith and the freedom of its application might threaten the dogmas of both, but the power for intellectual definition was present in the western races more strongly than in the eastern peoples and in the end developed at the expense of Christian unity and in spite of the active restrictions of the Church. It was by a curious twist of progress that some of the possible elements of complication from Greece and Rome which the Church had banished, should seep into their native west again through the conflict of the rival faiths; that Islam, which has not progressed in the modern sense, should preserve some germs of the ancient curiosity which underlies our modern science, should build upon them and should transmit them to the future more potential factors than she had found them.

The almost conquest of west by east in Christianity increased the possibility of restless questioning between intellect and instinct in western thought and gave it, perhaps, its power of growth. Intellect did not permanently react upon the east, there was little questioning and there has seemed no growth. In this has been the fundamental rivalry which brought the clash of faiths although within itself there was no question of either faith. It was the rivalry between potential growth and potential stability; it was racial, climatic, geologic, not religious. To us, the significance of the struggle as such is in its possible reaction on the expression of the west. There were two factors. Islam maintained old forms which, as we shall see, the west found suited to its own ideal, which the west took to itself and made instrumental in its own expression, through which the expressive result was immediate and self-evident. Islam also maintained ideas in which the west recognized the kinship of its intellect and which the west gradually absorbed, making them steps toward the expression of a future beyond even our own present. In the quarrel of the faiths the crusades were futile struggles; in the progress of complication they became essential links beyond the restricted vision of the combatants.

Christianity imposed on life the ideal which dominated the west; the barbarian vigor as it concentrated became constantly more eager to express, but neither ideal nor vigor predicated form; the barbarians were young as nations and form was not inherent in their culture. Much of the ancient store remained from Rome to be the foundation of the expression which was to grow and the final complexion of western form was from the interaction between ideal and vigor. We cannot estimate what the result might have become if the development had progressed from Rome without the reaction to the east which came with the crusades. By them the achievements of Byzantium and of Islam were opened to the west and the example was so strong in the accomplishment that we must state its complication with the general western culture to be prepared for the appearance in the architecture of forms which can be traced to Byzantine and further eastern sources. It is certain that the Gothic building would have flowered in some different way without the reflex impulse from the crusades, but it is almost certain that this possible different flowering would have possessed the same spirit, the same intensity, the same aspiration, which was present in the actual. The conflict did not add to these, although its backwash brought new forms to help express them, and the western enthusiasm which took up the conflict was the same as that which burst forth in the stone beauty of the architecture, no matter whence the forms.

The accomplishment of the crusades was not in their attempt. The earthly kingdom which they sought to establish in the holy places was so clearly on western lines that it differed from Byzantium more than Byzantium differed from Islam. The divergent pathways of Christian feeling which we realized before the Roman downfall, had continued divergent. The eastern Romans considered the western nations as mere upstarts, whose help perforce they called, but whose assistance was almost more inimical than the enmity of the Mohammedans. The rifts in the Christian dogma were already very vexing and made coöperation impossible between the helped and helpers and, even among the helpers, coöperation was broken by the inconsequence of feudal rivalry. The hierarchy of action which the Church had sanctioned could not maintain the unity that was necessary for success and the western states in Syria and Palestine were overthrown within a short century after they had been established. In all this striving there was little that was pertinent to the distant future; it was but a whirlpool in the current of the action, but in its sweep it gathered things of value for the future from a distant shore to which the main stream had not reached and the very seething of the current displayed the essential character of the action, displayed the force beneath it and the futility which broke across its surface. The crusades have interest for us beyond result because they themselves became expression and paralleled, as such, the significance of the buildings.

The crusades were the climax of response to the demands of the mediæval Church, but there was little real unselfishness in the adventure. The Church was almost more than human in its collected knowledge of humanity and in the basis of its summons is a striking illustration of the way the organization endeavored to force mankind to win entrance into the heaven the Church held out as recompense. Pilgrimage to sacred places had long been pronounced most efficacious in the escape from the results of sin; the scenes of Christ's experience were the final goals of pilgrimage. The crusades were massed and embattled pilgrimages, not only to visit but to reconquer these goals from the defilement of the infidels. In their winning, heaven was almost sure for the sinners who undertook the enterprise—and all men were sinners. In their winning, also, the earthly power of the Church was spread, the possible dominance over the eastern Church increased. There was no real hypocrisy. Had there been, the very real enthusiasm never could have followed. The Christian hierarchy believed in itself, believed in its mission and prodded its human charges in the sensitive spot where fear still held their imaginations bound to the observance of the forms of the ideal. And as always in the mediæval action and its expression, release from fear carried enthusiasm beyond fear to some reflex of the love that was behind fear in the ideal. While the enthusiasm lasted, everything was possible, but the sober practical forces that were in the daily living met facts and lost the certainty at least that was in the fear. The enthusiasm waned, even the possibility of unity was lost; the crusades were fruitless to the Middle Ages because the future had interposed and turned the results to its own advantage. The ideal had failed to meet the whole of life and life continued its complication toward some other possible but distant definition.

The crusades were the cathedral of the mediæval chivalry. All the aspiring motives were behind them; all the push of Church with its age-old wisdom and of people with their new-found consciousness were in them; all the beauty of personal feeling and the recognition of the divine immensity beyond the personal were present. The crusades were the culminating structure of action in the thrall of Christian imagination. Imagination was their strength; its failure became their weakness. Imagination had overreached itself, had left the earth, and the facts of earth reconquered life, weighted the scales against imagination until time with its complication should bring another balance and create again supreme expression.

CHAPTER IX

GOTHIC ARCHITECTURE

GOTHIC architecture was the incarnate imagination solidified in stone. It became an everlasting symbol of the spirit of the Middle Ages. It had all the aspiration toward the ideal, all the love that was the essence of the ideal, and all the vigor of the new blood which tried to reach the ideal. Where the beauty of the Greek had stopped within the logic of the reason, the beauty of the Gothic progressed through logic to become the triumphant utterance of a faith. It was more than a commanding summons to a people; it was a passionate declaration, yet spoken in all humility, to God Himself. The apparent simple unity of the Greek temple had disappeared. A great group of arches and roofs and towers and pinnacles soared into the sky, carrying with them the prayers and the hopes of men, but the unity was there and the logic and the honesty. What the Greek had desired to define, he had been artist enough to formulate in its perfection; what the Middle Ages dreamed, and dreamed feverishly, they expressed as definitely as man could have declared those things, and stopped only where the limits of human power became inarticulate in the vastness of infinity. Just as Christianity, with all its questionings of spirit, had shattered the realization of classic culture, so in these great restless buildings, the horizontality, the self-sufficiency, of the old types of structure was completely broken by the active forces with which stone may be imbued. Gothic architecture was the apotheosis of the arch.

Both expressively and structurally its achievement implied a long development, implied all the development of the many pasts which had complicated through Rome and which had concentrated when the Christian ideal had grasped the barbarian spirit. Gothic architecture grew through the Greek and through the Roman, caught reflections from Byzantium and the east, succeeded from the interactions among the experiments in the new west. It was as directly, and almost as immediately, a descendant from Rome as was the Byzantine, but where in Constantinople all development soon ceased, stagnant in a pool of wealth, the expression of the young barbarian nations germinated for a time amid the turmoil that came with the infusion of new blood and then burst forth in a new and culminating statement. The origins of the Gothic are not dim, although they have afforded much ground for argument, and we can trace most of the steps in buildings still extant through which its characteristic combination was completed.

This development must be our first concern, and the evident background of it all was Rome. The traditions of her work survived. The monuments she had reared still served many of their original purposes. Christianity was a Roman gift. During the centuries of the invasions there was little building and no apparent progress, but order gradually increased. The Church was regnant and the monasteries became centers of influence to which we owe much of the architectural revival that was firmly established by the tenth century. These Christian institutions formed a network of untroubled centers across the turbulent Europe; their interests were unified and were drawn continually and directly from the original fountain-head of Church. What architectural unity there was, resulted from their endeavor, was a unity of expression by the Church and through the restricted ideal of Church alone. Structurally there was unity only in the fundamental suggestion which had been grasped from Rome, from which there grew scattered experiments toward progress based on the basilican type.

The basilica itself was a completed thing when Rome fell. Its form had long been fixed and these western monkish builders had not the material or the cunning to reproduce its traditional embellishment of mosaics and rich marbles. These were of the old Rome, and in the west they ceased. The arrangements of the plan, however, which had been sanctioned by so long a usage were eminently fitted to the ritual of worship. The long front of the nave accommodated the people, its continuation toward the apse, the clergy. This continuation is called the choir and where it separates from the nave, a broad cross-aisle, the transept, was developed, running north and south at right angles to the east and west direction of the main structure. Custom prescribed the entrance at the west end of the church, the apse at the eastern end, and as the rites increased in complication, the side aisles of the nave were continued around the apse to form an ambulatory for the religious processions. Around the apse, again, beyond the ambulatory, there radiated a cluster of chapels. Most of these features were present in the early western churches and as new structural methods were evolved, no cause was found to change these fundamental dispositions; indeed, the problems which the adaptation of construction to these features brought forward for solution were the means by which the final Gothic came to its full flower.

All the suggestion for the plan was in the legacy from Rome and, with the advance of structure, the arch which Rome had fostered gathered a new energy, began in a crude way to show its powers of stability under proper balance, as well as its inclination toward destruction when that balance was neglected, for many of the early vaults crashed to the ground. The success which came was hard won, but it did come. The active arch was shackled and, when it was made subservient to man's desires, the great vaults became safe, then lighter and more graceful, until experiment gave place to knowledge and the vaults rose balanced and delicate, with every force alive. The development which Rome had blundered with, but persisted in, came in the hands of her successors to its climax.

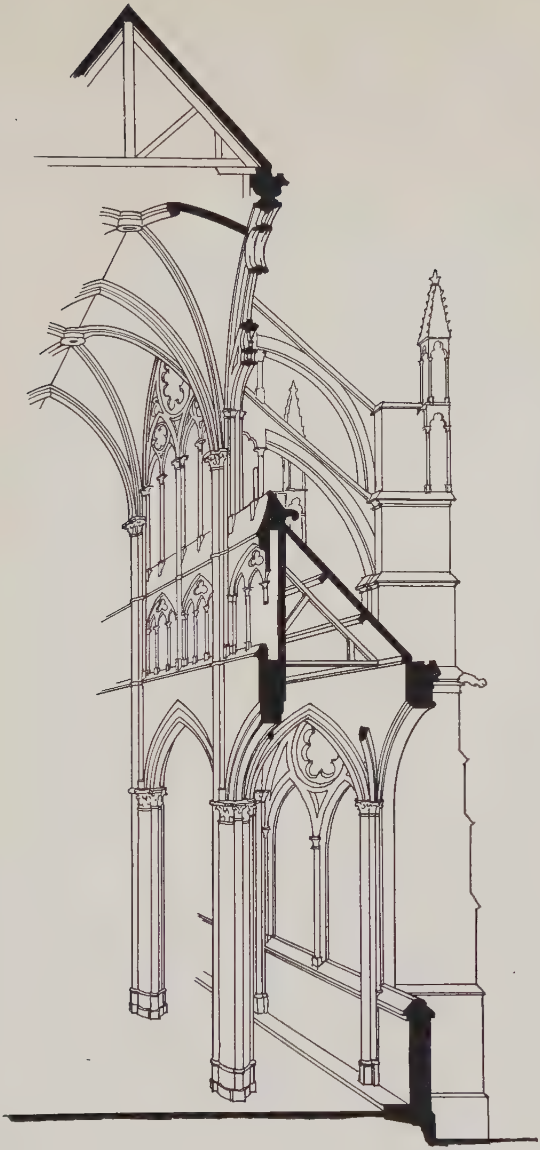
Rome had recognized the structural principle which persevered, the concentration of thrusts and their balance at isolated points, but what in Roman hands was massively clumsy in its stability, hardly more than the suggestion of an idea, became, in its later realization, a matter of exact calculation. The story of the rise of Gothic architecture is the story of the mastery of this necessary engineering knowledge. The organic structure which was evolved was the skeleton of the Gothic, a skeleton as essential and more obvious even than that of the human frame, for this skeleton absorbed the flesh and was itself wrought into the most beautiful form. It was as nakedly honest as was the Greek, but let us emphasize, where the Greek had stopped, this went further; where the Greek form was final perfection, the Gothic form, sometimes less perfect, must at least continue beyond the Greek realization, beyond the Greek intellect, and show forth the ideal that was not inherent in the structure. The Greek, in his logical definition, had stated structure, had left it virgin and had reserved the proper places for splendid sculptural decoration. Structure and sculpture were separate things combined in an absolute harmony. In the Gothic the marriage of sculpture and architectural form was consummated. The structural frame was as clearly recognized as in the Greek, but it was recognized by the minds and wrought by the hands of sculptors who thought in symbols beyond structure. The Gothic sculptured decoration was almost as beautiful as was the Greek, but its forms merged into the structure, became essential parts of the organism and were conceived in the spirit of an architecture which was, itself, a symbol beyond itself. And the symbolism of sculpture and architecture was the same, the symbolism of Christian aspiration. Both Greek and Gothic were statements of ideal, but where the Greek, reacting from the facts of life, could complete its definition in the facts of structure, the Gothic, not content with life, could not define, depended upon suggestion which must be in the facts, but which carried spirit beyond them toward the mysterious plane of the intuitive ideal. This was as necessary to the completed Gothic as was the logic of its frame and, if the frame in many of its elements can be traced to forces latent in the work of Rome, this all-pervading spiritual fabric was not Roman, was the gift which the new blood from the north had brought. The facts, even of Christian expression, had roots deep in the culture of the past; the imagination came with the growing present, colored the whole and gave the facts themselves their final countenance.

And we must recognize still other elements. The imagination was inherent in the northern conquerors, but they were as yet untutored in any fashion of concrete artistic statement. The marvelous activity of the arch was latent in the forms which Rome had used, but its real powers were unrecognized. Some great development, surely, would have resulted from this combination, whatever course the shifting events of history might have taken, but destiny was precise. She turned the growing west back upon the old east. She gave the wondering newcomers a knowledge of Byzantium; she threw them, with a shock, against the throbbing enthusiasm of the Mohammedans.

History has found it convenient to mark the high point of the transition from Roman work to Gothic, and class it as a separate style, the Romanesque. The name fixes the foundations of the development in the Roman models and superficially there seems great similarity to the Byzantine —which was the later Roman. Probably, however, this similarity was as much the result of mediæval contacts as of coördinate evolution from Rome. It is an exaggeration to say, as some do, that almost all the west knew of the arts was learned in the east, although it is true that the renewed architectural impetus came, particularly to France, after the habit of pilgrimage had assumed appreciable proportions and that this impetus produced a group of buildings strongly Byzantine in character. In most regions the Byzantine contribution was not in structure, but was a first lesson in that concrete expression of ideas, whose technique the barbarians must learn before their own imagination could have full play. The forms of carving echoed those of the eastern empire, and yet the suggestion, almost from the first, was hardly of the east. Through the eastern contacts, the western sculptors became acquainted with the best that Christendom could fashion, but their own imaginations were more powerful than the manner of any craftsmen who had worked under the material civilization of Byzantium, and the spirit of the west was never dominated. The achievements of the Romanesque were divergent and experimental, while the influence from Constantinople was formulated and had all the prestige of the empire, but the experiments were to coalesce into a great unity which absorbed the eastern lessons without abating its own vigor.

It is difficult to follow any one line but that of the Church among the intricacies of the Romanesque. The feudal states, more or less isolated, worked each much in its own manner, building on legacies and impressions whose emphasis shifted with the differing preponderance of race and tradition throughout barbarian Europe. The forms in Italy, midway of the peninsula and to the south, remained more classical than in the north where the barbarian blood was thicker, and they nurtured recollections of Rome whose influence was potent for the future. In the neighborhood of Venice there was direct dependence on Byzantium; in Lombardy there were stronger tendencies toward original solutions; Provence in southern France made individual advances, and Toulouse, in the southwest, made others of a different nature. In the western counties was the greatest French reaction to the Byzantine and in Normandy a type developed, destined to aid the Gothic and also to affect the work in England. In the Île de France and the adjacent counties, the nucleus of French nationality, little building was accomplished until the centralizing power gathered impetus and then, with the growing spirit of a self-conscious people, there blossomed, here, the almost sudden flower of the national style. Here the real Gothic came to birth, here its problems finally were solved, and here it was brought to culmination.

Throughout the variety of possibility, two big directions are manifest, depending on the proportion of barbarian blood, which was dominant in the north, far less so in most of Italy. Both tendencies proceeded from the impulse of the Church, but the northern worked along lines progressively structural, developed Rome's suggestion, created for the immediate future, while the southern, with a



GOTHIC STRUCTURAL SCHEME

greater inertia, was more pictorial, remained more nearly on the old Roman plane, retained the point of view, unconsciously, to which the later centuries returned consciously in the Renaissance. The work in France expressed all the turbulence of the feudal nation curbed by the inflexible Church; so far there was no hint from the expanding subterranean energy of any phase of the massed people. There was heavy power in the buildings and some order, and there was gloom and the sense of terror. The romance which we see comes largely from our own perspective. Constantly the work wrought churchly variants on the structural legacies from Rome and, thrown back to the east by destiny, it drew much of its superficial inspiration from the formulas of Byzantium, but already the reaction from the grip of the ideal was working downward among the people who were creating a solid France within a shifting feudal unity, so that the power to express was broadened. Roman remains, Byzantine influence and western imaginative energy combined, in the tenth and eleventh century, to state the Gothic problem, and this problem was the essential one of structure, of the naked skeleton. The final impact with the further east gave the last clue and made the solution of the problem easy.

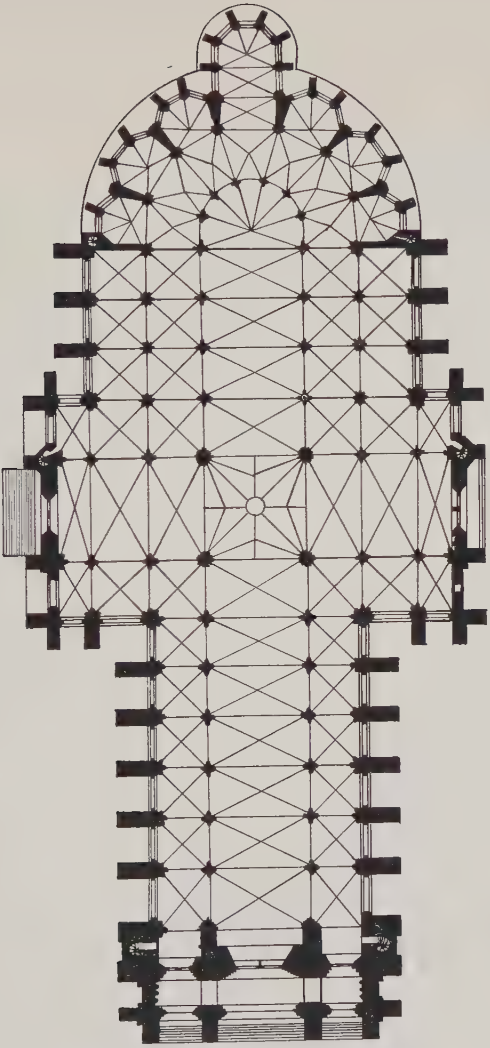
To understand the difficulty and its solving we must restrict ourselves briefly to the structural evolution. The desire was to vault a building safely in stone, to concentrate the strains at fixed points and transmit them to the ground, while the original arrangements of the plan were retained and sufficient window-space provided. It was a comparatively simple step to convert the columns of the basilican nave into heavier piers, to make the arches more robust and to roof the nave with a continuous semicircular vault. But this vault must be supported at the sides and, when the halves of similar vaults were made to spring across the aisles, abutting the main roof on the inside and pushing impotently against massive walls without, the church was left in almost total darkness. The semicircular, or barrel vault was abandoned and the nave was divided into separate compartments, or bays, each with its own groined vault. The scheme was this: four great arches surrounded the rectangular bay, one along each wall and one at each end of the compartment, across the nave. From the corners two other arches formed diagonals and met in the center. These were the groins, and the four roughly triangular spaces thus formed were filled with warped surfaces of masonry. Immediately other features of the problem became clear. All the push of the arches and of vault concentrated at the four corners of the bay and, unless they were strongly counterbalanced, the structure collapsed. The strain was above the piers of the nave and must be carried across the aisles and to the ground. We have not space to detail the steps by which success was reached. The device which was invented was one of the most characteristic features of the Gothic. It was essential to the stability of the structure. It tested the power of the arch and made possible the visions of the imagination. This was the flying buttress. Usually a quarter circle, it sprang into the air, clear of all the walls, crossed above the aisle roof and met the impact of the vault-thrust at the one point where counter-thrust was needed. Its foot was founded in the earth, and its first climb, before it bent to its work, thickened the outer wall of the aisle. It was the result of much clear thinking along engineering lines by minds we have been calling half barbarian. Like all Gothic, it had the power to be far more than structure, but this other expression we must wait to analyze when we have mastered the conception of the skeleton, gathered the last gleanings of external impetus and seen the whole Gothic frame at work.

We are not portraying a chronological order of development. We could not do so with final assurance, even if we had the space. Events came thick and fast in Europe. One feature was displayed at one place, another, almost at the same time, at another. The final combination seemed to take place as if by magic. The miracle of the Church was repeated in her constructions. The concentrated strains of a vault were held by the invention of the flying buttress, but the vault itself, as we have visualized it, had by no means reached a satisfactory form. The round arches, lengthwise of the nave, were smaller than the ones which crossed the nave, and the diagonal groins had the widest span of all. If these different semicircles sprang from the same height, the levels of their tops varied disagreeably. Sometimes the smaller arches were stilted so that the levels from which they started were raised to make the highest points of all nearly equal. Sometimes the length of two arches along the nave was included in a single bay so that the vaulting space was approximately square, and this arrangement led to a partial solution, in which a third cross-arch was added in the middle of the bay, resulting in six warping surfaces to form the vault. All these attempts were clumsy, even in the rectangular divisions of the nave and aisles, but when they were applied to the irregular compartments of the rounded ambulatory, where the inner sides, touching the apse itself, were measurably shorter than those on the greater outer curve, the inequalities made the task almost impossible. What this solution would have been had the western builders been left unaided to find an answer to the problem, we cannot guess. Their skill evolved the flying buttress and we need not doubt that it would have met this difficulty also, but at this juncture, destiny intervened again and the clue came from without. In the maelstrom of the crusades, the west met more than the fanatical, warrior spirit of the Arabs, and learned from them the pointed arch.

Two segments of a circle meeting in a point have, in masonry, all the stability of the completely rounded form and an infinite flexibility. All the irregularities of height and ugly warping disappeared with the introduction of the pointed arch. It has been called the principal characteristic of the Gothic and, from its use, some historians have named the whole development the pointed style. This gives the form, however, too much credit. The fundamental nature of the Gothic lay in its concentration and transmission of strains and in the imaginative spirit of its creators. The pointed arch solved their last difficulties of form and gave the Gothic much of its distinctive appearance of organic growth, but it did not create the Gothic. No outside influence could have done that, and there is little reason to doubt the eastern origin of this device. It was traditional in the east, the Mohammedan builders had long used it and before the west had come in contact with them it did not appear in Europe. The Mohammedan builders had used it but never in the Gothic way. To them, it was a pleasing form; almost immediately in the west, it became an element of organic structure and with its introduction the Gothic was ready for its consummation. The last riddle of its problems had been answered and, as we look back, the great result of its achievement has become so much a part of our conceptions that it is difficult to state the problems, except in terms of their solution.

Much of this development was in monastic hands, but the more flexible organism of the realization had things to say beyond the strict religious ideal of monks or Church. The dogmatic simplicity and singleness of outlook back of the Romanesque diffusion were gone. The miracle remained, indeed became more intense, but its expression partook of all the growing spirit of the age and a suaveness grew with the suppleness of the architectural skeleton, a tenderness in the execution of the sculptures, that insisted, throughout the beauty of the whole conception, on the intensity of the divine love which made the ideal bearable to the mass of humanity. As the structural possibilities became complete, so their spiritual power was enhanced to express the aspiration of the Middle Ages. The great shrines of the twelfth and thirteenth centuries had left all monastic seclusion. They were the towering cathedrals of the communes, where they felt the energy that was creating the nation and echoed the struggles which brought it to cohesion. They were the creation of Church and king and noble, of rich burgess and even, to some extent, of the disdained people. The miracle of God was in all their hearts. The erection of God's temple had the efficacy of a crusade. The participation in the sacred work brought absolution from sin, and wealth invested in its consummation made easier the road to heaven. The power of the imagination still dominated the growing factors whose final joining was to crush out the rule of the imagination, and the building of these French cathedrals was attended by scenes of such enthusiasm that we cannot wonder at their power to affect us even today, when the spirit of their fashioning has vanished with the past. All the aspiration toward ideal which stone could hold was wrought into their fabric and was made everlasting.

We have analyzed the individual solutions which made the Gothic. Now we must gather some impression of one of these great buildings as a completed thing. The plan we know, and so can easily visualize its arrangement in the outward expression. The dominant fact is uplift. All the lines carry the eye toward heaven. Arches and flying buttresses push upward, pinnacles gleam against the light, the soaring roof catches the reflection of the sky and, as if the essential skeleton above the sacred ground were not strong enough in its vertical suggestion, proud towers balance the entrance, solidly square among the masonry, twist into octagons as they free themselves and, tapering to sharply pointed spires, seem to puncture the very clouds in their endeavor to carry man's aspirations to the court of God. There is a restlessness, a constant interplay of thrust and



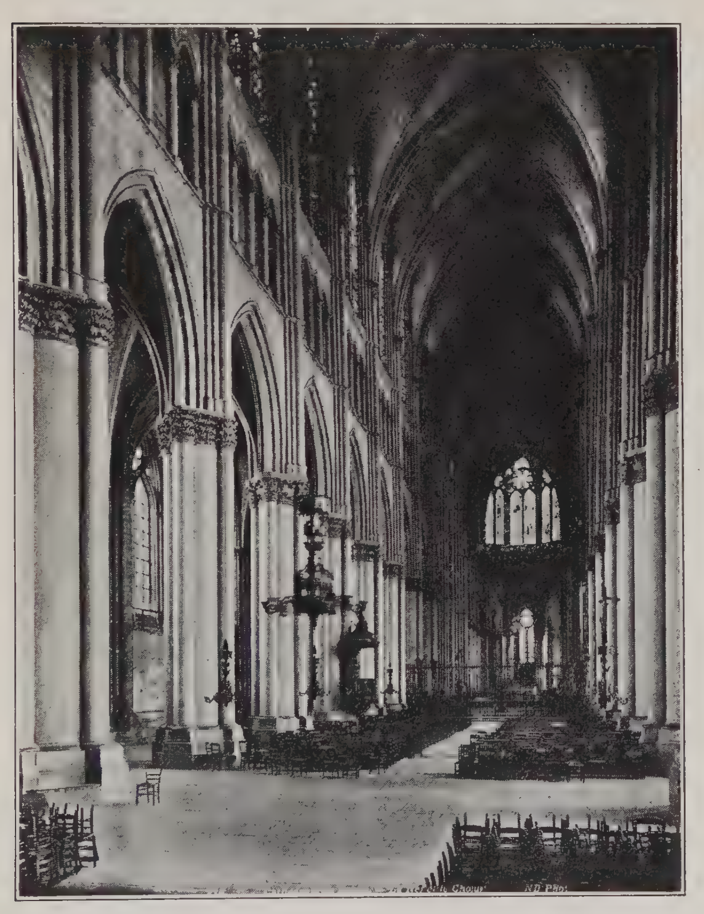
PLAN OF AMIENS CATHEDRAL

counter-thrust. The sense of unity is almost lost in the evident attempt to gain stability. All the warring elements of earth and hell battle around the sanctuary of heaven, but since heaven is the heart of it all, the battle is ordered. The everlasting victory is proclaimed throughout the ranks of the continued conflict.

Within, the battle cry is dimmed. It echoes up aloft among the thrusting vaults, with just enough insistence to make more bearable, more human, the rhythmic mystery of the sanctuary. Nave and transepts and choir meet in a great cross. Ordered piers and arches open vistas to smaller shrines. Above, a graceful gallery accentuates, in a more staccato rhythm, the expression of arch and column and, above again, the great windows of the clerestory transform the earthly light into the gloriously solemn colors fitted to a celestial presence. All the walls have become windows, and these windows, filled with the grandest decoration that has ever been devised—with glass, colored beyond the hopes of man to create color—lead the eye through stories of chivalry and martyrdom, through images of saints and angels, to the Virgin Mother enthroned with the infant Christ, to God Himself, shielding the people of His thought, spreading His omnipotent influence over the vast well of jewel-shot gloom, from the supreme windows of the apse.

Only gradually do our amazed senses realize that, after all, it is but a mighty symbol; that it was made by men like those it dwarfs to such insignificance of body and of spirit. Gradually, we begin to read the order and understand the skeleton. It is open to the eye throughout: all its members are essential and all the strains and thrusts of the structure are accentuated. Its complexity, once understood, shows the most organic orderliness and the most outspoken honesty. A great network of arches and segments of arches springs from the ground to imprison the painted glass, and leaps across space to uphold the roof. Every groin and rib, even among the highest vaults, has its foot firmly in the ground. It was considered from the beginning and all the reactions of its final strain prepared for.

In the completed type, each mighty pier of the nave has ranged around it four lesser and more slender shafts. Two support the mouldings of the pointed arches which screen

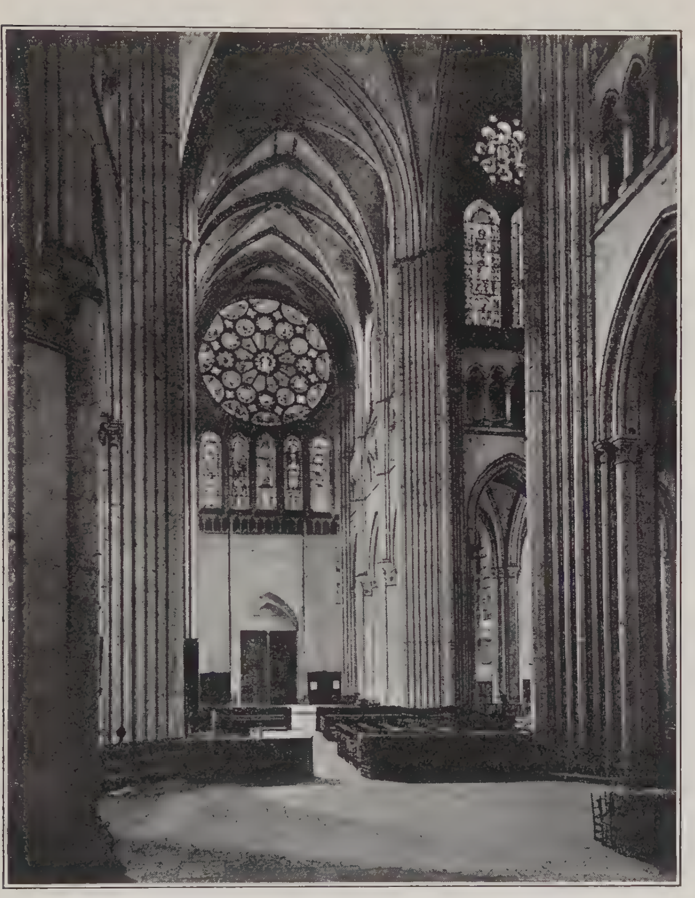


INTERIOR OF RHEIMS CATHEDRAL

away the aisle, a third forms the inner spring of the transverse arch of the aisle vault and the fourth, turned to the nave, rises above the main pier toward the high vault itself. Based on the pier capital, two companion shafts group themselves with this fourth and continue upward. At the level of the gallery, two more increase the group to five and spring aloft. The central one, which rises from the ground, carries the great cross-arch above the nave, the inner two which flank it support the diagonal groins, and the smaller outside pairs carry the arches of the clerestory windows. The same logical division of construction swings around the apse, similar piers complete the corresponding functions across the aisles and the heavy ribs which hold the roof at the crossing where the high vaults of the nave and transepts and choir meet in a great opening, are founded and subdivided according to the same clear plan. The shafts of the best period do not bend and merge into the arches which spring from them. They are definite supports, each with base and capital, and where the arch begins their function ceases. They are structural members as logically conceived as those of the Greek temple and, although the constant desire was for uplift, for the amazing push of the vertical, the Gothic builders were too truly artists to neglect the advantage to be gained in this very direction by the contrast of horizontal lines.

The length of the building on the ground makes some horizontal feeling inevitable. The capitals of the piers and the points of the nave arches rhythmically suggest it, the level of the gallery floor accentuates it and binds the vertical shafts to a stronger unity. The smaller and more decorated arches of the gallery play variants on this theme and the sills of the clerestory windows echo it, while its last insistence comes with the repeated capitals below the vaults.

The framework of the building almost completes its fabric. There is little actual wall. A certain height of screen exists below the bottoms of the aisle windows and there is another piece where the arches of the nave support the gallery, the triforium as it is called, which covers the otherwise blank space behind the aisle roof. The nerves and sinews and bones of the frame are bare and everywhere between them are the great spaces where stained glass may increase the expression of the spirit. Almost the fundamental



TRANSEPT OF CHARTRES CATHEDRAL

reason for the church seems to have been to create windows. The pointed arches of the aisle and clerestory enframe them and from the west front and the transepts, the great roses, immense circles of ordered and glowing color, are among the triumphs of the Gothic builders.

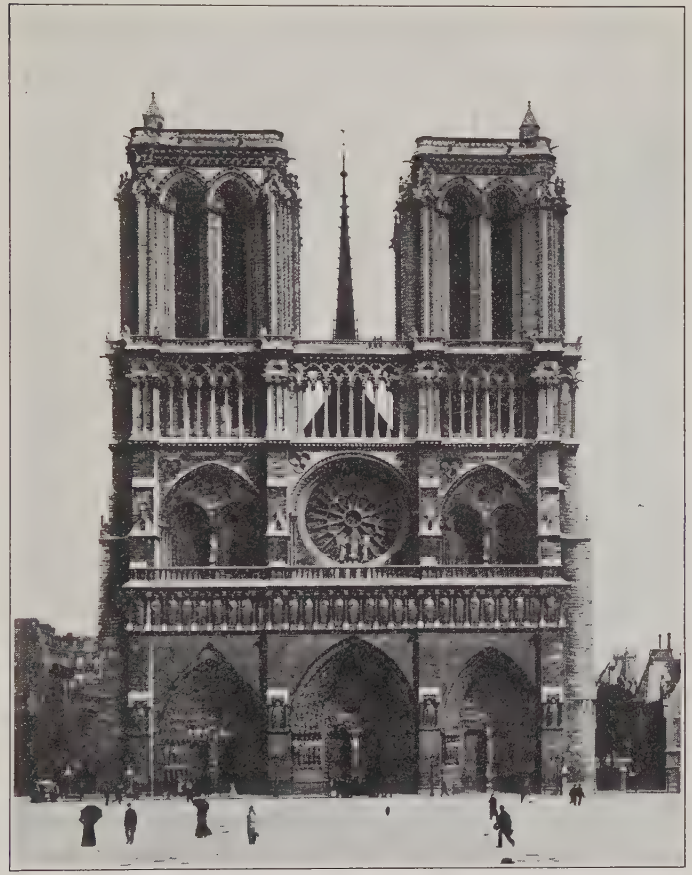
All these large surfaces must be subdivided or the glazing would buckle. The logical idea of the skeleton is carried into the windows and a frame of shafts and arches retains the glass and by the tracery of its silhouette against the light, illustrates in a minor key the all-pervading system. This tracery is a distinguishing characteristic of the Gothic. It seems to have evolved from the piercing of thin slabs of stone and the varying patterns of its progressive development are among the clear evidences which indicate the period of one piece of work or another. In the supreme French cathedrals usually a cusped circle is pressed against the great point of the wall-arch of the vault, which frames the entire window, by two smaller pointed arches, also cusped. These in turn may be subdivided, forming long panels whose points join with the cusps above in the triangular pattern of the trefoil. The circles echo the greater circles of the rose windows, whose tracery was designed on the same principles, except that in the latter the structural units radiate from the center.

It would be impossible to put in words the beauty of the glass itself. We might call the windows walls of jewels, but that suggests a certain hardness, a pride of wealth and an ostentation which is foreign to them. Rather, they impress the feeling of disdain for human standards of the worth of riches. The fact that they were of surpassing splendor made them worthy to be an offering to the Virgin and to God; their worldly price was nothing. They seem to mark off a great content of air, to separate it from the earth, giving it color and light and the very essence of what man might imagine to be the air of heaven. The earlier work of the twelfth century was perhaps the finest, but the standard was maintained with little loss well into the thirteenth. Nothing like the achievement of these periods has been accomplished since and all the later attempts in this direction are weak and tawdry in comparison. We call it painted glass, but that does not describe its method. It is, rather, a transparent mosaic, a fitting of small pieces of almost unimaginable beauty; flashes of crimson and gold and green, shot through a background of unified and luminous blue, defying description. The images and sacred stories woven in the patterns helped to induce the proper spirit in the worshipers, but the celestial fire of the thing itself was a force to carry the spirit beyond all reach of body. What Egypt had painted on her walls in masses of flat colors, what Rome and Constantinople had spread on theirs in rich mosaics, France, freed from all dependence on opaque matter, made into walls of light that negatived material, so that it became the supreme expression of the imagination of a faith.

WINDOW FROM CHARTRES CATHEDRAL

Above the walls hang the shadowy vaults where here and there reflected spots of color shift and vanish. The carefully balanced surfaces look delicate almost as the walls of glass, but they are the stone roof of the nave. No vault ever was altogether weatherproof and a wooden covering was needed for protection. This was the first time that a roof, as such, has particularly claimed our notice, has become a vital piece of architectural expression. The sloping sides of the ancient pyramids certainly were not roofs and their inclination produced a feeling of weight rather than uplift. The roofs of Egypt were flat, those of the Greek temples, with their slight angle, partook of the balanced moderation of the whole and did not essentially attract attention. With the Romans, the somewhat increased rigors of the climate widened the angle of the pitch, but did not change the significance and their great domes are more impressive from the inside where they seem to bring the sky down toward the earth. The Gothic roofs met the requirements of a colder and more stormy region, but they more than met them. They made a virtue of them. The sides slope quickly upward and the half-cone above the apse is often finished with a sharp openwork spire, or flèche. All the broken leaping of the flying buttresses and pinnacles is soothed and unified but never contradicted by the great upward sweep of the roof surface, which, strong to defy the wind and rain and snow, is also, since it is true Gothic, a culminating part of the announcement of a message sent aloft to God.

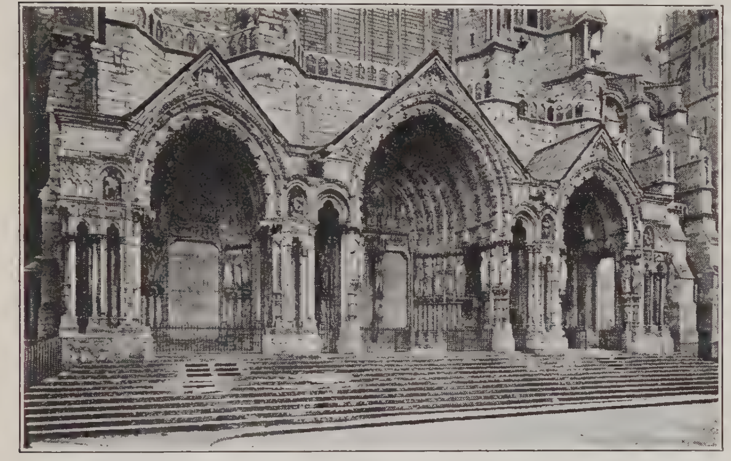
And what the roof announces the towers intensify. They are pure symbols, serve no essential practical purpose. The ideal scheme ranged two at the west front, two at each transept, two to flank the apse and one, greater than all, to rise above the crossing, dominating the entire expression. No such complete plan ever came to realization. We find the beginnings of all its parts, the perfection of but few, where the square bulk of the tower proper was converted by clever adaptation of forms first to an octagon and then the octagon, bent and sloped and sharpened, the surfaces pulled inward and pushed upward, until high in the air the final apex is more one with bird and cloud than with the masonry beneath and becomes the final note of triumph and confidence in the message hurled to heaven.



WEST FRONT OF THE CATHEDRAL OF PARIS

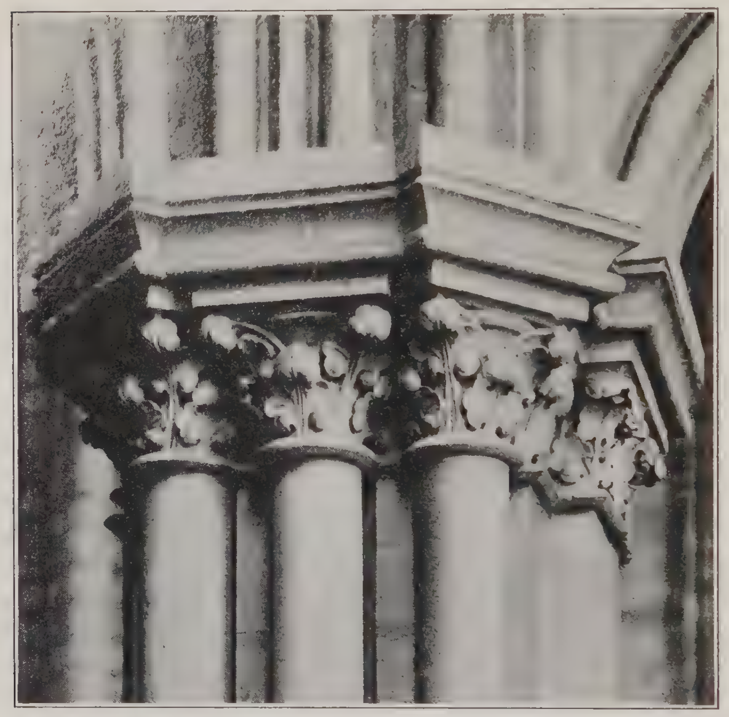
On the great west fronts, however, care was particularly lavished. Here the towers invariably are present and in some cases, one of them a supreme example, they carry completed spires. The work in France was so consistent, depended so logically on bettering the mistakes of one building in the solutions of the next, that a type of front was wrought which we can analyze, recognizing the distinctive features which compose it, while we admire the individual variety of each conception. The towers stand guard beside the sharply pointed gable of the nave roof, whose too acute insistence is here for once usually modified by a horizontal screen of arches. Below, the great rose window in the center sifts light into the nave, and lower still, on the level of the ground, three doorways open into nave and aisles. Somewhere across the composition, another horizontal band, of arched niches and royal statues, the gallery of the kings, binds still more strongly tower and gable and rose and portal into a single organism of symmetry and balance.

The doorways are most interesting in their expression. Sometimes they are overhung with sheltering porches, sometimes they are merely great splayed pointed arches, but always they are the pathway of erring man toward the miracle of his God. Here the restless aspiration, the insistent vertical, is stilled and the lines are bent more graciously to voice a welcome and also to cry a warning. Here at once we touch the sculpture. Saints and angels and martyrs crowd to meet the worshiper, Christ and His Mother stand to receive him and sometimes even God Himself is present. Sacred characters fill all the hollows of the mouldings of the arches. Tall figures line against the shafts which frame the entrance. All the glorious company of heaven has been made concrete through the imagination of the Middle Ages and this congregation, which is pure sculpture, must make us stop amazed at the insight of the mediæval builders. It is pure sculpture, but it is also great architecture. It is not even architectural decoration, but essential architecture. All its composition is ordered into lines which express the structure, all the forms of individual figures are almost as completely architectural members as are the shafts and capitals. The arrangement of the interplay of light and shadow is architectural, yet most truly indicative of the character of the saintly individual expressed. This sculpture is an outstanding declaration of the oneness of the Gothic spirit. Never before or since has there been a more tremendous exposition of the way that stone form may be wrought into structure and at the same time crystallize spirit. Never has structure itself been so made the exponent of spirit.



NORTH DOORWAY, CHARTRES CATHEDRAL

This unity of sculpture with structural necessity, so overwhelmingly present at the doorways, continues throughout the intricate fabric of the building. Similar portals give access to the transepts. The massive weights needed to balance the buttresses are opened into columned tabernacles sheltering some saint or other. The waterspouts projecting from tower and roofline are carved in the shapes of devils and grotesque monsters who portray the dangers of an inconsidered life and yet are chained in their malevolence to their own small part in the universal scheme, to spit curses as impotent as the water they drain away. The capitals of the shafts and piers almost forget the precedents of classic times and seem to turn directly back to natural forms for their inspiration and yet, in spite of their fresh recollection of leaves and stems, their expression is almost always architectural. Their sinuous twists and curves, the deep undercuttings which give them accent, most cleverly realize the transition from shaft to arch moulding or vaulting rib and are justly proportioned



GROUPED SHAFTS AND CAPITALS, PARIS

to the needs they serve. Sometimes we can trace their sources as clearly as those of the forms of the Egyptian capitals, but there could be no question here of a secondary origin even if we did not know the stages of their evolution. The growths whose forms they hardly conventionalize are part of the world that God has willed and as such are worthy of an honored place, just as the birds and animals they sheltered were gathered and thought brothers by Saint Francis of Assisi. The power of love, culminating in the worship of the Virgin, spreads out including all created things.

In these buildings, even on the members where all representation ceases—and the interiors are almost bare of images—the mediæval sculptor's point of view persists. The treatment of the mouldings is but a simplification of the more complex groupings, gives much the same effect as the crowded figure carvings of the doorways. There is great economy of material, complete adaptation to the work at hand. The openings of doors and windows, the sections of arches always splay out at an angle, are never perpendicular to the wall they penetrate and the slanting surfaces are cut into hollows and outstanding rolls, whose light and shadow make clear the structural working at a glance. These mouldings are manifold in variety and the best of them most beautiful in outline. All classic models are disregarded and the mouldings, like the more elaborate sculpture, have become essential acting members of the fabric, helping in its labor, accenting its spirit.

Throughout all the intricate interactions of the different features there is a constant and delicate adjustment of proportion. Without it, visual chaos would have been inevitable and in such a system even visual chaos would have brought immediate physical destruction, for all the active members are trained down until they are mere sinew and bone. To try to analyze the mathematical relations of these proportions would be endless. The rhythms and ratios which abound in the organic composition are roughly evident in any visualization of the building and are fundamental to the design. The realization of the scheme created them and from that moment they have kept the details of the scheme reduced to order. The situation is too different, too complex, to need the subtle inclinations and curvings of the Greek lines, but the Gothic builders grew to understand almost as surely as the Greek all the conflicting demands of their problem. Vaster than the Greek, these buildings never lose their relationship to man. The scale ascends from smaller things to greater ones, from these greater ones to a comprehension of the entire mass and the Gothic sanctuaries rise into the air almost as perfect as the Greek and more impassioned. The moderated and completely realized Greek design was founded on the balanced horizontal and vertical proportions of a rectangle, but the restless uplift of the Gothic grew from the concept of the aspiring triangle.

There is no need for us in this discussion to turn back to our original definitions and recapitulate the logical usefulness of all these Gothic forms, nor to laud the beauty of their evident symbolism in contrast to the possibility of ignorant surface decoration. We have said before that what the Gothic expresses complements the realization of the Greek and that the two together perpetuate in stone the greatest of man's ideal conceptions of this world and the next. Certainly these two great achievements tell different things, but tell them with most surprisingly similar methods, with identical honesty. Whatever purports to be, actually is and is the best that has been done to do the thing it does. The philosophies of the tales are different, the languages completely separated, but the human will to clarify a fundamental truth remains identical in both. We need not bring the Greek nor the Gothic to be tried under the laws we have laid down for architecture, for the Greek and mediæval builders by adhering to their own convictions have made those laws. Working far apart in time, but side by side in honesty of endeavor, the conditions of their production were not dissimilar. In both cases the result grew from the combination of a northern race with one already old in culture, grew after a period of darkness and turbulence, in a society broken into warring elements whose strife, perhaps, kept the creative power at white heat. But here they separated. One made the realization of life on this earth an æsthetic ideal, the other felt the preparation for the next world a practical necessity in this. The expression of the Gothic went deeper into men's souls than did the Greek, but the Greek builder would have criticized the ecstatic Gothic craftsman for exceeding the proper limits of his art. The Greek reälization was founded on the appreciations of his senses; the Gothic striving attacked the insoluble problem of metaphysics.

There was nothing static in the expression of Gothic architecture, and no moment of stability in its development. Its problems were solved, one by one, during the experiments of the Romanesque, but when all the solutions had launched the completed style, the evolution steadily continued, carrying the logic and the inspiration ever deeper into the structural skeleton. The cathedrals were a long time in building and there is not one of them that does not show many phases of the changing growth. Their creators were in one sense so naïve, they were so intent on improvement, so enthused and perhaps so astonished with each new success, that there was almost no attempt to fuse the variations into a uniformity of detail. Unlike the Greeks, who constantly refined the delicacies of a settled type and produced in their work the feeling of matured perfection, the Gothic builders seem to have passed excitedly from one discovery to another and preserved a freshness which indicates no lack of consideration or adaptation but which almost never repeats.

Roughly we speak of the cathedrals of the twelfth century and the thirteenth, but there is no dividing line, no real separation between experiment, solution, culmination and the final loss of vigor during the period of decline which came with the waning imaginative impulse toward the ideal. Perhaps the changing proportions of the features of the great naves best illustrate the tendencies of the development. The massive piers at first retain much of the weighty feeling of the Romanesque. They are not grouped with minor shafts and all the complication of the active members begins above them. The triforium galleries are relatively high and deep and the fenestration of the clerestory not completely opened to the frame. There is a much stronger horizontal emphasis and a most impressive dignity. During the first two centuries the dignity remained, but the horizontal was suppressed and the dominant rhythm of the pointed arch and clustered soaring piers became more evident. The individuality of every active member was increased and their functions clearly distinguished. The gallery was made much lower and its depth narrowed to the thickness of the wall, while the clerestory grew to its amazing height and openness. This was the climax. The spiritual impulse began to recede and the liberty of personal action was restricted as the mechanical mastery increased. The mouldings and the tracery lost their structural emphasis, stiffened to thinner, ever more vertical attenuation, or lost all functional reserve and sprawled and curved in beautiful but unexpressive flame-like patterns. Cleverness took the place of dignity and elaborate conceits tried to conceal the death of the imagination. The Gothic had played its part and the European mind was ready for the next epoch.

We cannot pick out any one building to make our type.

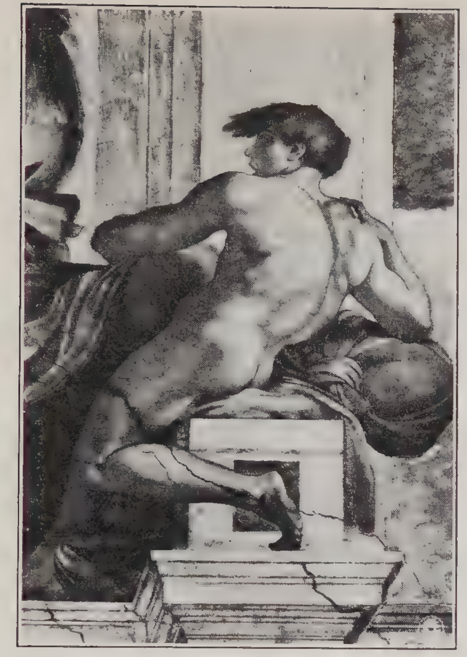
Jerusalem was captured by the first crusade in 1099. By 1150 the Gothic existed as Gothic in the abbey church of St.-Denis, the burial place of the French kings near Paris. Before 1200, the cathedrals of Paris, Laon, Bourges, Le Mans and Chartres were rising, and Amiens and Rheims and Beauvais followed quickly. These perhaps form the supreme group although there are many others. Any one of them might have been the marvel of a century. In Greece we can fix the Parthenon, in Rome, perhaps the Pantheon, certainly St. Sophia stands alone among the Byzantines, but in the Gothic we cannot choose one from among this great group and say, "This is the model." All are magnificent; each has some crowning glory in which it surpasses the others. The marvelous west front of the church at Paris almost equals the perfection of the Parthenon in the absolute balance and rhythm of its conception. Laon has most nearly the completed crown of towers. Chartres has two supreme spires and glass which has no possibility of rival. The nave of Amiens surpasses by a little the beauty of all other naves and the great coronation church at Rheims has a consistency the others lack. Bourges is the most individual. It has five aisles and no transepts, giving the interior a most impressive and unbroken sweep. Beauvais is a colossal fragment, with choir and transepts rising to an immense height. Its builders overshot themselves; the tower they created crashed down and the nave was never finished.

These cathedrals, many of them dedicated to the Virgin, all of them growing directly in the sphere of the concentrating nationality, are the greatest Gothic and the most French. The name of Gothic was given later as a reproach by men who had forgotten and did not understand. Gothic architecture in its essence is French architecture and it is the most perfect art, the most complete expression which France has even given forth. It spread as the nation's power spread. It absorbed the other types on French soil. It became the architecture of all Europe. The Germans tried to copy it, but they never caught its spirit. The Italians modeled a new pictorial theme upon its forms and produced much beauty whose significance we must try to understand in another chapter. Reviving Spain adapted it to her own more somber character, but only in England was there a great parallel development, created by close contact, echoing much of the real power, deserving to stand not with the French but close to it. English Gothic has very great significance, but it has received another quality, one more personal and foreign to the French; one not fundamentally Gothic, whose presence contradicts a certain might of the imagination which France expressed. France was the soul of the Middle Ages. All the great forces of the epoch unified in her and her architecture crystallized the union.

Since this architecture was so truly representative, there can be little surprise for us that, like the Greek, it was essentially the work, not of individuals, but of the entire race. The individual modern achitect did not as yet exist and the ruling mind in each production seems to have been the bishop, the abbot, the religious chapter, or even the prince or city for whom the work was done. They were not educated to design, perhaps did not even understand the intricacies of structure, but they were imbued with the spirit of the ideal and their imagination was directed by the elements of success or failure in the results which preceded their own endeavors. Under them, carrying out their visions, were the trained master-builders and the masons, united into guilds and traveling here and there as their profession demanded. These latter learned all the new structural devices, all the advances of the sculptor's art, and to each, as best fitted his own powers, was given some share, almost without supervision. From this variety of personality came much of the freshness, much of the individuality, and to this perhaps was due the constant change, the disregard of unity in detail. Gothic architecture was a fabric of small stones, with appreciable mortar joints. Each stone seems to have been completely wrought before its setting, which made the methods of the masons easily applicable. The great cathedrals, in their complexity, in their divergencies and even in their makeshifts were the combined efforts of many artists, working from tradition and experience, transcribing their individual spirit and appreciation of beauty, their impulses unified by the minds which controlled the whole design; and great and small alike were absorbed into the aspiring genius of the Middle Age and of France. The achievement was a thing which stands alone in art, a thing absolutely impossible of reproduction in the artistic superficiality and hurry of the modern civilization which has since developed.

The tragedy of the Gothic was that the dream faded. No catastrophe from outside intervened to cause decline. The forces which had long been growing, and which to a certain point had helped the great awakening of the twelfth and thirteenth centuries, began to dominate ideas. Commerce and wealth increased and with their increase the greed for even more became stronger than the hopes of heaven which might be bought by wealth expended on religion. The fear of the unseen gave way before ambition. Concentration was accomplished and personal safety was obtained, no longer to be fought for. The Middle Ages settled down and the imagination, the strength of the ideal, diminished as fear abated in the comfort of material facts. New thoughts were in the air, but they had not brought their impulse toward a new expression, before the Gothic stiffened and at the same time relaxed into a perfection of uninspired craftsmanship. Men may still have believed that they felt with the old enthusiasm, but their productions contradicted their assumptions. The efforts of the past could not illuminate the present nor coerce the future.

Gothic architecture had made a mighty attempt. It had sought to define the intangible and had succeeded beyond all other reachings in that direction, but its very incompleteness shows the fundamental impossibility. Not a single cathedral was really finished. No one message went aloft with the full wording of its original conception. All the fever of the Middle Age was there, all the aspiration and the hope and, in the end, all the hopelessness. The ideal was too vast and at the same time too restricted. In its endeavor to control man through spirit, it neglected facts and was defeated by them. The mediæval unity never was attained. Humanity was not equal to the task and could not have remained satisfied had it been accomplished. The Holy Grail of the mediæval legends was sought by many, but the one who found attainment could not return to earth. The imagination carried the souls of men beyond the earth and the astonishing expression of the architecture followed them as far as concrete expression could follow, but it was true architecture and its roots were in the earth. It was a servant of man. It met his needs and showed forth his deep desires. All that he could fix, it fixed. It echoed his warring spirit and his aspiration toward the mystery of the Christian ideal. Beyond the mystery, man had guessed infinity and here architecture stopped. It could not define in stone what thought itself could not make precise. Gothic architecture was never a complete realization. Before it could have reached that point, the problems of the universe must have been explained and man granted a knowledge of the mysteries of God.



CHAPTER X

ITALY

EUROPE lost its conviction in the divine unity of the Christian ideal and the Middle Ages ceased. The attempt to dam progress by an ultimate definition of the aim of progress failed because what was seen as definition restricted one part of life and ignored—more than that, tried to deny—the other part. Life itself rose in contradiction. The ideal which had been acclaimed completeness became but another element of complication; the human energy which had forced the great expression continued its advance to meet the future and when the restriction of the ideal was broken, became diffuse, recognized the variety of the human problem, experimented with the increasing factors which even today have not been recombined into another unity of statement.

Amid diffusion, the energy of living continued and increased perhaps in application. Untutored, it might have predicated fruition in the results of living beyond any conception, but it was not untutored. The peoples who had been barbarian discovered life from the fullness of their own existence, but they discovered it in terms of refound Greece and Rome and they lived it still in terms of the Christianity which they recognized subconsciously could give them but part of their desires. Fact and intuition, intellect and spirit, were juxtaposed in an intimacy never before reached and the surface of life seethed with the contradictions which not only split society, but which also pulled the intimate life-strings of the individual in opposite directions. He must remain a Christian or be damned; he must live in the new-found light of reason or be dissatisfied. He was become the irreducible element of the next stage in complication. Existence was posing the riddles of modern life.

The rediscovery of life was not the result of the accidents of history which gave it its complexion. Energy must continue action until exhaustion—if that be possible—whatever the transmutations. Energy could not be restricted by an ideal it had created, once the restriction became evident. The unity of the Church had failed and the dam broke. Fact and spirit were destined to mingle in the future because both are part of life and because all attempts to isolate life from either one had broken down. The approach of the upheaval created lines of action which were the apparent causes of the upheaval. Commerce reached beyond the Mediterranean and the spread of Islam stopped its progress. Commerce, baffled, turned to exploration and exploration brought discovery of new worlds which carried curiosity beyond the field of commerce. Reason, inhibited by the dogmas of the Church, passed beyond Church to life itself, returned to the experiments of Greeks and Arabs, applied suggestions, widened the scope of experiment. Curiosity predicated science. The organization of the Church, stagnant in its domination, became corrupt; belief in the essence of the ideal behind the Church repudiated the organization and made the final break in unity which destroyed the proclaimed miracle. And without the miracle, the forces of the spirit could meet intellect more closely, could be carried by curiosity toward the search for any immutable truth the ideal held. When the dam was broken, curiosity gripped both intellect and spirit, bound fact to imagination and is still whirling them in the direction of the future.

For once a group of dates becomes significant to us. By the end of the thirteenth century—roughly 1400 A.D.—the greatest of cathedral building was over; the northern expression of ideal had passed its zenith, partly from the weakening of the aspiration and partly because the burst of freer energy which had reached its climax in the focus of the communes was rapidly subjected to the royal control which erected, through nationality, a more concentrated dominance than ever the Church had wielded. The energy of action was generally restricted, this time in the narrower and parallel channels of the nations, and the political freedom of the peoples was destined to be still further tempered during centuries of military rule. The energy of commerce continued its expansion and the energy of the reason burst the bounds which the organization around the ideal had imposed. In 1450, printing was invented or at least made practical. In 1452, Constantinople fell before the Turks. In 1492, Columbus discovered

America. In 1498, Vasco da Gama reached India around the coasts of Africa. In 1517, there came from Germany the outbreak of the movement which was to divide the Church and change for millions the whole complexion of religion. Within another century experimental science was established in spite of Church and all its potential power directed toward the future.

These are among the evident causes of what seems a sudden great awakening, but these were the accidents of history and fundamentally they were results; results of the deeper cause, postulating a broader view of life, which had been working since the beginnings of attempted definition. It has been stated that the whole period from the fall of Rome to the Renaissance was but the apprenticeship of the barbarians through which they reached again the level whence Rome had toppled. The Renaissance never occupied that old level. Return to past achievements was impossible. What the future needed from pagan Rome and from the past behind Rome was never lost, was but in abeyance while civilization, pushed onward by the fresh barbarian energy, digested the Christian impulse which had come through Rome but was not essentially Roman. That accomplished, the pagan past was called to light again, was added to the Christian present and new heights were attained through complication. The reasoned ideas of the old world were revived for the benefit of a newer world that was to come, but they were revived across a gulf of spirit that made them forever changed. Men called it the Renaissance, the rebirth, and it was more rebirth than it could be a revival, for the human mind could not jump the immediate past to the distant past and find that unchanged when much of the enthusiasm of the finding was the enthusiasm of the Middle Ages breaking the bounds which the Middle Ages had imposed. The humanity of life welled again into the human elements which were jarred awake from the compelling dream of the divinity of life, but in the awakening some flashes of divinity remained to color the further efforts of the human.

The result was confessed complexity where unity had been attempted; a complexity which the Church must still deny, but which gave freedom to the peoples; freedom from the strain toward a divinity they could not reach, freedom of reason to accept the facts which life found inevitable and joyous, but which the Church had labeled sin; freedom of action where the greater freedom of more powerful action did not prevent. The individual had emerged from among the masses; all living reacted from the personal, no longer from the universal. But the personal was in conflict within itself. Freedom had brought contradiction and life became a problem, not of attainment toward the fixed limits of ideal, but of inner question as to wherein ideal existed. Change was established, its direction hidden; the immediate past was ignored so far as possible because it was familiar and its failures patent; the distant past was cherished in its rediscovery because it had become new and its failures were forgotten. But the undercurrent of life was away from every past even while on the surface there flashed the conflicting forms of all the pasts in the tumult of their complication. The instinctive presumptions of Christianity and the reasoned facts of paganism stated the opposites of life, but the real contradiction went hardly deeper than the surface; was not in the truth of the statements but rather in their restrictions, because each had denied that part of life it could not seem to fathom. One had balanced all on spirit, the other, all on reason, and now all balance was shaken to its elements so that the future, if it became great enough, might create a broader balance which should include both reason and spirit and satisfy a more complete humanity.

Expression followed the complexity of life. Where the unity of the ideal had postulated a unity of outlet which had concentrated into the greatest of massed expression, were now all the possibilities of individual statement whose significance depended altogether on the vision of the individual who wrought expression. This did not immediately produce a chaos of personal idiosyncrasy. The freedom that might have led to such a thing was approached through waves of influence which created a certain homogeneity, so that in spite of the potential freedom, in spite of the individual, we can trace a broad development. There was an increasing liberty of spirit through the shattering of dogmatic unity, a gradual emergence of the reason beyond the restrictions of the spirit, a definite return, by means of reason, to the old forms which had been erected by the reason. But the freedom reached to the individual and the development took new impetus from individual power. The stream had many channels. Some drifted away from life and were exhausted, some were formulated and lived as simulacrums of creation, some advanced with increasing significance toward the future. Some were most tremendous in their revelation of the conflict of the awakening, others reflected but its surface and were hardened into forms that came with the pagan reaction. Depth and superficiality, sincerity and pose, were mingled. Fashion became possible in expression, but fashion could not blind all the creators, and the curiosity which sought the true direction of ideal amid the sudden chaos of incomplete ideals was never halted in its advance. Here was the real outlet. All that has been progressively fundamental in human statement since the broken unity of the Christian attempt toward definition has been the expression of further seeking, of unquenchable curiosity which has imaged beyond the facts of conflict a common unity in which conflict may be stilled.

THE future was to be for all of Europe and for more than Europe; the first present of the Renaissance was for

Italy almost alone. She was the prophet who visualized the inevitable for Europe. It was her blood and mind, never altogether barbarianized, which reacted naturally from the individual, which maintained a practical viewpoint toward religion, hesitating before the visionary unities, which continued in spite of Christianity the tradition and the understanding of the older Rome. Italy, it seems upon the surface, gave the Renaissance to Europe, but much of that appearance is in the glamor of Rome with which she embellished her leadership of the all-European progress and which spread, through all her contacts, to hold the forces of complication—somewhat as Rome itself had held them before the Christian era—until the future should delve below the surface again in the never-ending search for unity and definition. Italy at least staged the Renaissance for Europe; staged it in forms inevitable to herself, not inevitable for the more barbarian north. It was Italy who made the first new statement of the importance of this earthly life and who made evident the power of the individual to grasp life—all Europe would have done as much eventually, without example—but in the insistence on her own inheritance, Italy established for the nations beyond herself formulas which had been outworn in the Roman past, and she emphasized an idea of dependence on precedent which reduced creation to copy and which still remains to narrow the definition of life and to baffle the endeavor of the individual.

Whatever the far-distant groundwork of her population and despite the several waves of conquest, Italy has always been historically divided between several races. The Roman power had smoothed the surface, had increased relationships, had erected a superficially concentrated culture, but had not eradicated the differing tendencies of blood. The barbarians had attempted to continue empire but when the instability of their material control became evident, their comparatively fewer numbers merely added to the racial medley. All the physical unity which was proclaimed in theory, the mediæval Italians broke down in practice. The political power was divided among a conglomeration of petty states, echoing race and further dividing it, which the mediæval empire could not coerce and which stopped their private warfare to combine kaleidoscopically against pope or emperor only to insure their own principle of separation. And what was true between the city states was more intimately and cruelly so within the cities themselves where consanguinity seemed to produce an even more desperate enmity of faction. Rivalry of race, disintegration of nationality to the city status, dissolution of even this restricted energy in faction, all tended—within a certain all-pervading quality of Italy, perhaps climatic, which we must recognize as present—to liberate the influence of the individual. The narrowed sphere of action magnified the importance of the personal even during the centuries when the more aspiring north still seemed to smother its gathering conflict in the acceptance of the ideal.

The Italian attitude toward the ideal increased the personal tendency. Perhaps the point of view had undergone little fundamental change since the old first Christian years when Rome still ruled the world and when the pagan facts were still cherished in many hearts. New names, new symbols, covered the old beliefs, but much that was old still smouldered. And just as the barbarian hierarchy of action was never permanently established, so the churchly hierarchy assumed a changed complexion, became a more direct radiation from the papal center which restricted religion to its divine jurisdiction and brooked little interference in the practical affairs of life. The pope, of course, was the vicar of God on earth—inherently his function was almost deified—but he was also a petty temporal prince among the other princes and as such was as little divine as any of the worst of them, became indeed a factor for the separation which the Church combated and was compelled, in his temporal interest, to wink at the individualizing impulse which was milling within the core of Christendom. Italy was too near the source to feel the full divinity and what was true for state and group in the larger way was equally so for the individual, freeing him in his daily life from the overwhelming sense of personal domination. Religion promised him salvation if he met his obligations and more than that, for it promised him salvation in spite of neglected obligation if he returned from sin to meet the formulas. Religion might be made a very practical personal affair and the Italian was ready, in face of hell, to grasp a more varied life than the Church alone could offer, was prepared to pit his personal energies against all the massed unities which appeared to him as shackles.

The frame of mind resulted directly from inheritance which weighed heavily in the balance against the impulses of environment. The development of Italy was a logical growth from within herself. It was the resurgence of the numerically dominant populations, united at least in their pagan generation; it was the gradual submergence of a conquering minority. Within the limits of established Christianity, the old Romanized races regained the control of their own minds, would have done so regardless of all contacts, but in the event, the primary contacts of mediæval Italy aided the consummation. Underneath them all was the revived commerce radiating, for Europe, from Italy, and concentrating, for Italy, in the still partially Roman east where the classic formulations of thought remained decided influences. Commerce depended on the individual, and commerce, which met new facts outside the unities, stimulated the greed for facts as well as the greed for gain. Italy, which retained some mental gifts of Rome, fed on Byzantium, which maintained the pomp of Rome, and Italy was never isolated from the reaction of the Roman achievement. When Byzantium finally succumbed to Islam, sending west again the last remnants of the Roman compilation, the Renaissance was an accomplished fact.

And yet there seems a certain contradiction in the position. Italy, for all her Roman leanings, evaded the idea of empire which the Church had inherited from Rome. The fundamental separation of race was stronger than the imposed ideal of concentration, now become a churchly weapon to combat the ideas which the original empire had fostered and toward which development was again progressing. The individual was already in the ascendant and he was too wise in his own position, in spite of heritage, and too satiated with Christian restrictions to accept other restrictions, even from the old Rome who seemed to mother his new freedom. Where freedom was at stake, Rome herself was met with reservations and it is in this we cannot fail to see the potential progress, assuming as we must that the power for change constitutes the possibility of progress. Italy, as she approached the Renaissance, believed that she was turning back to Rome to reinterpret in herself the Roman life. In fact, she was turning back only for the things she wanted to interpret her own new vision of existence. Where Roman facts contradicted her desires, she ignored the facts and continued in the pathway of desire. But the weight of Rome's example was very heavy. It is not surprising that the Italian, as he grasped the new fullness of his freedom, should picture in the old ways the new-found facts which his ancestral recollections believed identical with the old. Freedom came to him in the Roman words, in the Roman forms, in the Roman attitude toward life. At least so Italy believed. Here is the turning-point for us. Italy, in the Renaissance, did not understand the advance that was flooding toward the future. Unconsciously, she was carried with it. Consciously, she was living in the past. Where she could copy Rome, as she visioned Rome, she did so. The result, in spite of copy, was the beginning of our modern selves, but the attempt to copy explains the incubus of Rome which we still carry.

If we examine the whole movement from a different angle, the individual becomes but the instrument of change and the forms of Rome no more than accidental trappings. The key of growth was in the hand of commerce and the final result was predicated in the liberty of spirit. This is the point of view from which the Renaissance becomes significant to ourselves, and more than a limited transitional age of tumult and conflict. None of the forces which combined in Italy to state the fact of change were restricted in their action to the period in which the first definite complexion of the change was manifest. They can be traced almost to the beginning of history and they are progressing beyond ourselves toward an indefinite future. They were articulated through the Italian nucleus and the articulation emphasized a new angle of the human problem.

We have mentioned almost from the beginning of our survey the ever-present economic characteristics of growth or of stagnation. We have not greatly insisted on them although the tendency increases among historians to consider them the one great causal chain in the human development. The economic structure arose from the need to procure and conserve food. It has met the utilitarian demands of physical life, just as structure has met the utilitarian demands of architecture; it has become as necessary to organized life as structure is to building. Society, in its progressive waves of complication, has concentrated, has made itself imperial, whenever the economic system has been far-reaching and flexible enough to deal with concentration. We have not emphasized the development of commerce because we have been seeking the materials of expression and commerce has not been the creator of expression. Alone, it has no more essential matter to express than simple structure cut off from all idea beyond itself, but it has never stood alone. Man has always been interested beyond himself, or in himself beyond the mechanics of his perpetuation. It might be possible to imagine a society altogether economic, but there has been no example. The very development of commerce, based on food, has so complicated beyond food that the expression of completed commerce would postulate much that was not essentially commercial. We have not even an example which can be reduced to this more expanded idea of commerce. Somewhere always there has been ideal, or the potentiality of ideal, or the reflection from ideal. Expression has resulted from ideal, and yet it is impressively true that no expression—not even that which has been most intense in its aspiration—has been freed from the reactions of economic conditions. Society could not hold together long enough for significant statement without its commercial sustenance. The utilitarian is fundamental and we must admit its function to modify the expression it has not the power to create.

In the perspective of the distant ages, we can with a certain accuracy make the distinction between the ideal and the utilitarian, can trace their developments almost as unrelated things—which inherently they are not—can appreciate the matter of expression without a detailed study of the economic circumstances which regulated the energy behind the utterance. As history approaches to ourselves, the rounded vision of the cultural system is obscured among the details, commercial as well as ideal; the striving reacts in all directions and the utilitarian must enter more definitely into our calculations. We need not see Egypt in commercial terms, but Egypt did not coalesce and become dynastic until some metallic standard had superseded the mass of perishable food as the foundation of barter. The area of concentration was limited to the flexibility, to the portability and to the reserve of the measure of value. Greece, among her other disabilities, was too poor to concentrate until Athens appropriated to herself the treasure of her allies, forced a transient empire and procured the energy which permitted her great expression. It was the power of gold as much as the military will which stabilized the Roman world; it was the misuse of it which produced the loss of energy and permitted the barbarian inroads. Byzantium lived on because what reserve remained had been transferred to the eastern focus. In the west, the barbarians were left to begin anew; the Middle Ages had to reconstruct the system. The supreme expression of the Christian ideal came only when the communes had stored up again the energy of commerce.

Expression always seems to follow commercial growth up to a certain point; up to the point indeed where the stabilization of resources permits the contemplation of ideal without the immediate danger of an empty stomach. It has never been the beggared hermit who has made his visions significant to humanity, and it has never been an individual or a community satiated with wealth. The quickened energy of striving must be present and the desires of commerce must not overwhelm the other factors in the combination. We must reiterate the need of balance—and there was an astonishing similarity of balance in the mechanics of the energy which produced the statements of Greece and mediæval France. The matter of ideal was very different, but in both cases the ideal was general while the unit of its expression was in the city group, multiplied and juxtaposed, founded in commerce, but keeping commerce subservient to ideal. The reaction of the energy was within similar limits and no reaction within other limits has brought results comparable to these. The greater concentration of the Roman empire completely overturned the balance; the Roman commercial bias was potential in the superficializing of expression and the modern commercial bias has done the same thing during the later centuries which have made us as we are. But between the French cathedral and our commercialism was the era of the Renaissance during which the balance was in transition, during which the ideal was shaken, but during which enthusiasm of some sort outside of commerce still dominated action to a degree which permitted the continuance of the old, if not the creation of really new expression, and during which the mechanics behind expression still reacted almost within the familiar limits of Greece and France.

The Italian cities were, in general, commercial centers older even than the communes. Their fundamental stability and influence were through wealth. Perhaps it was that alone which allowed their continued integration and growth in spite of faction; certainly it was that which predominated behind the power of the individual within the cities. And yet, during the first full period of awakening when the Italian mind was becoming the free vehicle of progress for the future, wealth did not dominate expression. Its influence was present, often it made expression possible, almost always it controlled the manner, but it did not altogether overwhelm the Italian matter until, with the crumbling of the old limits of energy, the will to copy reduced expression to be the instrument of the luxury of commerce.

THE efflorescence of the commercial evolution made possible the freedom of the Italian mind, through the juxtaposition and the consequent conflict of ideals. From whatever point of view we approach the Italian Renaissance, we shall find that point of view reflected. For whatever problem we may bring to it, we shall find an answer or the recognition of what is still a question. As life is multitudinous and individual, so the Renaissance was multitudinous and individual and with a glare of contrast that has faded from our own existence. It was the personal struggling through the mass, it was the eternal pagan emerging from the Christian, it was ascendant wealth blunting the power of ideal, it was man's body almost denying soul, it was a broadened world of facts, it was all the crude power of the future in its elements. The Renaissance was intellectual, material, sensual, passionate, vicious, exquisite, philosophical, religious. It was whatever the individual found within himself or grasped from the confusion which surged around him. It was emancipation, and the enthusiasm of emancipation predicated the continuance of expression. The Renaissance feverishly stated its position, but we must view the statements, not in the light of its own feverish present, but in relation to its past and to its future if we would find the significance in its creation. The Renaissance as we look back upon it was inevitable, not because the thing itself actually happened, but because everything preceding it had happened; it was to be a great factor in progressive cultural evolution, not in the conflict it created, but in the possible solution of the conflict it might suggest; it was to create really significant expression in just so far as it understood the fundamental bias of its problems.

What, explicitly, were the possibilities that opened to expression? The all-inclusive answer is a negative. There could be no attempt at a complete redefinition of the human problem. Italy was breaking down definition, not creating it; could only replace the unity of the Christian statement with a reflection of the Roman compilation which had never contained unity. The Renaissance had no organic thing to say. It faced an era which may, out of the very multiplicity of elements, bring unity again, but Italy was dealing only with the elements. In terms of future, she was discovering the possibilities of life and her expression could do no more than state the problem. But Italy was not consistently or consciously visualizing existence in terms of future or as a problem at all. The reinstatement of the Roman manner was the goal for much of her enthusiasm; revulsions to Christian formulas were the salves for conscience still trained in the Christian habits. Expression was subjected to the threefold influence. The immediate Christian past still overshadowed present; the distant past was become the model for the present; the inherent truth of life, out of both pasts, was projected toward the future.

All three impulses were limited; the first two had been proved so by experience in the past, the third was kept so by the immaturity of experience in the present. The Christian had the power of established habit and continuing energy; had the advantage of the survival of conditions under which the creative energy of the Middle Ages had found its outlet. The pagan had the weight of its formulated achievement. The truth of life had all the excitement of curiosity. But the Christian was restricted by a growing disbelief in its fulfilment, the pagan was superficial from the eclectic manner of its revival and the underlying truth was narrowed in that it was visioned in the light of the other two. Commerce affected all. It was developing beyond the expressive balance, was subjecting statement to its own conditions, tended to put manner ahead of matter, and view even manner from expediency, demanding the greatest return for its expenditure. The conflicting urges reacted through the unstable instrument of the individual who might be quicker than the mass to break tradition, who could more easily become eclectic in his knowledge, who had the power to concentrate in his experiment—but within the limits of his personality—and who was open to all the temptations of wealth. The complexity had the potentiality of chaos in its dependence on the individual, was restrained from chaos only by the human limitation which evolves the power to reproduce more often than the power to create.

One thing becomes clear as we realize the confusion. If the Italian expression of this period was to be fundamental in its statement of the underlying progress of the period it must have reached, subconsciously, a unity of curiosity, of the search for truth. No new-combined idea of truth had been attained. It was search alone that could be stated, and the progressive small discoveries along the pathway. But does search, does curiosity without at least a vision of its satisfaction, produce the matter of expression? It is not the unknown that we can formulate, but the known, however faulty the steps by which the conviction of knowledge may be reached. It has not been search but the attainment of some new level that has brought the supreme examples of expression, and the forces which the Renaissance made evident have not today reached the level of their final statement. It seems incontrovertible, even in its postulation, that if there was really significant matter in Italian statement during the period of the Renaissance, that matter was not alone the product of the forces of the Renaissance.

There can be no question as to the greatness of Italy's expression. Across confusion, there is a glorious band of form and color, of fact and spirit, that in itself quite negatives confusion; there is a unity of beauty which defies all the factors of separation. Somehow, an all-pervading quality has filled the disjointed racial soul of Italy and produced an utterance which states ideal as well as conflict and which, through painting, brings another revelation of humanity worthy to rank with those of Greece and Gothic France.

To understand how closely are interwoven the matter and the manner of artistic statement and so to place the Italian painting in its true position, it will be worth our while to isolate this same relationship of manner and to tabulate it for the nations we have already considered. Egypt ran the gamut of expressive means, but so restricted them in her desire for result that they approached identity rather than echoed different facets of her life. All the arts reacted directly from their common source and were directed toward a common end. They had the coördination and the continuity of Egypt. In Greece the manner of sculpture stands forth conspicuously comprehensive. The defining power of the race which formulated its ideal of life from the relationships of fact, expressed itself preëminently in abstract sculptural forms. The manner, the point of view of sculpture, which is essential form, was present in all the other manners, not because the Greeks consciously exalted sculpture as their expressive canon—they were too truly great in their perceptions to permit that any art should be warped beyond its proper limits—but because their racial genius was bounded by form. The result was sculpture that has never been surpassed, as well as a supreme example of a racial preconception. There are two distinctions here, however,—really parenthetical—which may clarify misunderstanding. We have said that Greek architecture was a more definite statement of the Greek philosophy of life, even than the sculpture. That was so because the architecture was more abstracted and more concentrated. A single temple contained the completed definition in all its organic relationships, so articulated that meaning was self-evident; a single statue may have been imbued with all the meaning but its translation depended on the perceptions of the beholder. And yet the architectural form was altogether sculptural in its architectural provenance, although—here is the second distinction—there was no superficial unity as in the Gothic where the provinces of architecture and of sculpture were mutually invaded, where the forms of image and of structure were merged in the final balance for the benefit of the architecture; for, as sculpture was the expressive racial manner of the Greeks, architecture was even more completely the manner of mediæval France. In the Gothic, where every energy concentrated toward the apex of aspiration, the means which could fix that aspiration was ready to disregard the limits which the Greeks had perceived as differentiations of the separate arts, was ready to make all manners subservient to the one chosen for the ideal statement. The massed enthusiasm of France found its vent through the hierarchical compilation of all the arts into the magnificent architectural climax of the cathedral.

Between Greece and France was Rome, with great diversity in the media of expression. Our present significance has reached the point where we may almost disregard the underlying Roman statement of engineering stability. That had passed onward to Byzantine and Gothic; was to seep into the future through their example. We must visualize once more the complexity of Rome's fundamentally borrowed artistic statements, must accentuate the power of wealth, the superficial and pictorial quality of form, the potential separation of so-called art from life. These qualities had been submerged by the barbarian influx which had brought expression very close to life again, had been forgotten under the pressure of the Christian aspiration in the north, but how would they react upon the Italy whose soul the barbarians never completely mastered? It is useless to conjecture all the causes. In the event the structural interest dwindled, the superficial quality survived in that the combination of form was regulated by the outward beauty of result rather than by the use inherent in the form. The pictorial rose to the surface in all the media of expression.

The frame of mind of painting was predominant in Italy throughout the Middle Ages and long before the art of painting blossomed into life from the stiffness of the Byzantine formulas. That blossoming was not delayed until the Renaissance, but came at the height of the mediæval impulse, came from the heart of Italy, was in no way borrowed, was in no way connected with the turning back to Rome. Its first expression was the expression of the Church, its deepest statement was the Italian statement of religion. It had not all the northern aspiration; it was tempered by a confident humanity—surviving from the classic, if you will, but which imposed no logic of the intellect. It welcomed the love of God and worshiped the Christchild, the Madonna and the saints. What the cathedral was to France, the painted spirit of Christianity became to the Italians.

True, the forces which made articulate the Renaissance aided the growth of painting. Painting is an art of the individual; the Italian seized upon it for his self-expression. It is an art which depends for all its greatness on the genius of its creator, not on the intrinsic value of its materials; commerce approved it for it paid back much with little outlay. It is an art of form, but in which the form may be overcharged with spirit; the Church welcomed it to influence the people. It is an art of form in which, also, form may express any matter or predominate over every matter, may express beauty without meaning, may express repose or conflict, may be not only Christian, but pagan or merely human. In so far as diversity can be formulated, it is within the province of painting to make the formulation; in so far as the Renaissance could be expressed, painting was the medium for its expression. But —here is the significance of the argument—if we could isolate all the Italian painting which was really a statement of the Renaissance, we should gather but part, a small part and a minor one, of the whole great development. Painting arose in Italy and reached its climax, in some respects, before the Renaissance became self-conscious, reached its climax under conditions similar to those of France and Greece and began to fail as the real forces of the future were liberated from the glamor and began their more sober and fundamental progress toward ourselves.

Painting was the essential expression of the Italian spirit, not alone of any phase in time through which that spirit passed. It was the expression of all the beauty which that spirit drew from its ever beautiful surroundings. We have not admitted the theory that the greatest architecture echoes the forms of nature; we cannot reject the conviction that this art of color and form and atmosphere which effloresced in spirit was founded, even where form ceased, in the nature which makes the call of Italy so potent. The appeal of Italian painting has the same potency and the same quality. It is the appeal, not of intellect, not of religious ecstasy, nor yet of conflict; it is the appeal of beauty that makes human akin to nature and that transfigures the human which has evolved from nature. It does not contradict what Greece defined or what France hoped, but it enriches both. What remained superficial under the Roman splurge and hard under the classic reason, came to its own under the touch, not of the organization, but of the essence of Christianity. Italian painting in its great significance compounds the beauty of love and the beauty of creation.

That was the essence. Almost with a single leap from the Byzantine stiffness, painting encompassed the human spirit. Through that spirit the form developed with the Renaissance discovery of life. To love and beauty was added the curiosity about actual things. Curiosity brought knowledge, reality of form, semblance of reality in perspective; light came and shadow. Bodies grew rounded and muscular and moving, eyes became intelligent and speaking. It was life where there had been dead symbols, but the diversity of life was losing the intensity of the symbol. The Renaissance utterly freed the manner of the statement, but in the end forgot the old essence and founded all on manner. Painting was the dominant art of Italy. Italy was the annunciator of the Renaissance, but in the throes of the awakening, Italy wore out her vitality. The power of progress was passed on to her neighbors; the greatness of her expression failed under the factors of the dissolution. The beginning of modern times brought the final burst of glory and the exhaustion of an Italian spirit which shall never come again. Commerce became the transmitter of ideal; expression followed the whims of commerce. What had been great before the Renaissance, what remained great throughout the enthusiasm of the Renaissance, was submerged with the old statements of ideal as the real forces which had brought the Renaissance proclaimed their true direction.

Painting was the dominant expressive art of Italy, but it was not the only art of Italy, nor the one in which our interest must be centered. We are seeking still to understand the growth of architecture and it is the architecture of Italy and the Renaissance that we must analyze. But the dominance of painting is most suggestive because, from all analogy, the point of view of painting may be postulated for the architecture. We see at once a contradiction of our architectural thesis, of our insistence on the structure. The frame of mind toward building must pass through a revolution to meet the mind of painting; it must do so in an era when all restriction is abandoned except the restriction of an example even more superficial, structurally, than the painting; it must do so in an era when the individual is free to make his innovations; and it must do so under the hand of wealth which has altered the very basis of discrimination. It is only with misgiving that we can turn to study the Italian buildings.

CHAPTER XI

RENAISSANCE ARCHITECTURE

PAINTING was the art through which Italy expressed her most significant reactions to life, through which her conflict of spirit was ordered, through which the beauty of her humanity was made immortal. The frame of mind of painting influenced the Italian statement in all the other media of expression. We must approach Italian architecture with this clearly in mind and with the foreknowledge that we shall meet a changed emphasis. In the Greek and in the Gothic, structure was the basis of design, the ever-threatened duality of use and form was fused into a unity of beautiful use. In the Italian there was no such fusion; the basis of design was in the potential beauty of form, regardless of use. This was not a matter of period, of Romanesque, of Gothic, of the Renaissance; it was not necessary in the heritage from Rome. It could not, conclusively, be defined as a quality of race unless we could evoke the evidence—which we cannot—that all the creative utterance of Italy came from one alone among her several peoples. There was a power behind race and dominating heritage,—participant in the creation of heritage so far as that remained Italian,—which spoke through the expressions of differing race and across the periods of progressive time and which infused its nature into all the statements. That power was the beauty of Italy itself; the picture which was inherent in environment. This was the background of Italian life and seems the one unity of the Italian soul. Race, in Italy, had not the Greek intensity of intellect to abstract the beauty of perception into ideal; it had not the northern intensity of aspiration to see it all in symbols. Nature remained a pageant of pictures; life became so; expression proclaimed the fact. No manner of expression could escape this mastery. Architecture followed life, was restricted in its essence, but found a real beauty from the beauty of environment which produced significance that hesitated, sometimes, on the verge of the fusion into unity with itself which would have placed it among the greatest. The pictorial, as Italy had breathed it, need not have contradicted structure; but the desire of the pictorial through the historic phases of its statement, brought neglect of structure. The duality of form and use persisted, sanctioned by the beauty wrought by form into the picture, until the creative power of the pictorial itself succumbed to formula; sanctioned then by formula alone to weight the future for minds trained to the subservience of copy.

The pictorial quality had been present in the old Roman work, but had been perverted by the Greek fashion and by the inherent lack of discrimination. Roman architecture had not been national or racial in the creative sense. From the Roman point of view it had been the superficial ostentation which had made elegant the material wants and pleasures, which had made living luxurious and which through its visual appeal had gratified the beholder with a sense of the power of wealth. It had been the opulence of form, the splendor of material which had attracted. It is not significant to us now that the taste of it had often been so bad; what matters is that it had been considered good in the degree that the combination of forms had been pleasing to those for whom it had been erected, not because it had had structural worth or symbolic import. That the appeal had been visual is the essential point. And the Roman degradation, even of the pictorial, had not been so fundamentally Italian as had been the persistence of the pictorial in spite of degradation, in spite of the foreign importations which the indiscriminate wealth of one dominant and inartistic community had imposed. When the wealth dissolved, the degradation lessened; the more meager picture was essentially a better picture and promised to be more than picture. The Romanesque was opened for Italy as well as France with all the possibility of fusion between form and use into the architectural unity which France alone was destined to realize in her achievement of the Gothic.

The first structural experiments of the Romanesque were more Italian than they were French, but they remained juxtaposed with the pictorial desire that was more Italian than any interest in structure. Once France began, her advance was rapid; she developed limits of creative energy which paralleled the Greek; the great architectural outburst came at the intense balance of the energy and slackened when the national concentration overthrew the balance. In Italy, nationality was not accomplished; the limits of the energy never attained quite the same balance in relation to ideal, the creative impulse changed more slowly, and in the direction of the picture. Between France and Italy the two parallel developments were unmistakable in their differentiation; in France was a growing unity of statement, in Italy, within the bounds of picture, an increased variety of composition. In France there was an enormous expenditure of creative energy which opened the Gothic period; in Italy, where the impulse toward expression was not so concentrated that it could spend its strength, a comparative conservation until the period was well advanced. The inner demand for expressive outlet which had pushed France forward during the Middle Ages, became urgent for Italy only when France approached spiritual exhaustion in her concentration, and the Italian statement took a different form. The compact of centralization in France brought forth a nation for the future; in Italy the resistance to concentration permitted only a cultural unity of diverse excitement.

Italy began her most fundamental statement during the Middle Ages. The diversity found common speech through the pictorial. The pictorial was exalted to its ultimate expression of beauty in painting; a beauty which, with changing balance—with the steady emergence of form through spirit—remained throughout the enthusiasm of the Renaissance. The manner of form in architecture had been the precursor of painting and now delivered building into the hands of painting, often actually into the hands of painters. Architecture could not, from its very nature, become the dominant art of the Italian later periods, could not from the nature of those periods be all-expressive. Sometimes it became great art, but its greatness was not within the limitations of its own art. It achieved beauty of form, fitted itself to the pageantry of life, stated the conviction of individuals, was progressively subjected to the backward-turning Roman impulse and to the devitalizing power of increased wealth. It was never freed from the external restrictions which prevented its own consummation, but there are moments when it approached freedom. Italian architecture, admitting its pictorial limitation which, indeed, gave it the one fundamental homogeneity and made it the echo of environment, was a true expression of those Italian things which its stone limits could express. It was a continuous development from old Rome and cannot be isolated into the fashions of successive periods, although the changing fashions went far to modify the pictorial quality of the surface. Italian architecture never quite forgot its Roman past; although it reflected both the Byzantine and Gothic it found the possibility of more essential progress in the rediscovery of Rome which strengthened its own tradition. The difficulty was in the fact that neither Rome nor Italy had ever understood the fundamental architectural problem, could never attain the fusion of form and structure. The new possibility of strength was negatived; the Renaissance submerged creative power. Renaissance architecture in Italy was not the climax of achievement it has been acclaimed; it became the death-struggle of significant statement; the formulas it imposed upon the future were but the death-masks of a fashion which, as such, had never expressed the vitality of a people.

The pictorial quality, which directed the manner of architecture, reacted upon its content; was permitted to be dominant because the content had not the strength or unity to become so. The Italian content was divided. The architecture of pagan Rome had had no conclusive thing to say until Christianity had stepped in to increase the significance of its borrowed forms. But Christianity never carried the whole soul of Italy beyond itself; in one sense, rather, it became the weapon which Italy employed to subjugate the barbarian invaders. Among them it should be the whole of life; at home amid the hazy heritage of ancient culture, it should keep its place, provide salvation, but not interfere too strongly with action. Separatism followed almost on the heels of the retreating legions, and separatism allowed omnipotence to an increasing number of individuals of action within the narrowing limits of each concentration. Architecture already served the individual as well as Christianity; the symbol of the physical power grew up beside the symbol of the Church; the fortress of the ruler often rivaled the House of God.

The individualizing tendency continued and the individual symbols were multiplied. The cities became juxtapositions of fortresses, stark as the death they threatened to their enemies in faction. Italy was a series of foci, armed against themselves and against their neighbors, amid which the churches rose, isolated in their peace which sometimes was not respected, unique in their power to unite faction in the statement of civic pride as much as in the statement of religion. The situation made evident the duality of architectural content even before the growth of architecture brought significance to either factor in the pictorial Italian manner. The fortress building of feudal France was as formidable as that of mediæval Italy, but has dwindled to insignificance, in the perspective of development, under the weight of the more vital and unified French expression. The fortress building of Italy became as vital in expression as the statement of religion, was destined to evolve, beyond the fortress, into compositions more intimately Italian than the churches. The later palace stated the inherent physical strength of Christian Italy; gathered much of the personal beauty that was possible in the picture; had, from its very flexibility, more power for rapid change, and was in greater danger from the ill-considered desire for change, a danger which was projected toward the future through the example furnished by the palace to the pride of wealth. It is true that the conservatism of religion also made little stand against the progress of the forms which threatened to be formula, but the expressive influence of the church was waning while the expressive dominance of the individual and of wealth was crescent.

Our analysis of Italian architecture must concentrate on the Renaissance, because it was this final Italian fashion which the accidents of history have imposed on us. We must keep in mind its true relationships. We must realize that it was not the flower but the exhaustion of an expression old as Italy herself, an expression broken in its matter for lack of unified ideal and restricted in its manner by another expression more fundamental in its reaction from the Italian spirit. To estimate the potential progress and the failure of the Renaissance, we must visualize to some extent the beauty of the older architectural pictures, and we must understand the historic provenance of the different waves of form which made the pictures. The possibility of the Renaissance tragedy was inherent in the point of view toward architecture from the beginning of the Italian development; it was increased by all the vicissitudes of that development.

The Romanesque stated the Italian point of view in recollections of the Christianized forms of pagan Rome. The panoply of the orders and of rich materials was gone, buried in the debacle of Roman wealth; inconsistency between form and use was lessened by the reflection from the Greek revival and by the paucity of useless form predicated by economy. And yet the inconsistency was present, to be emphasized once more when renewed commerce brought back the physical power of enrichment. Fundamentally, the conception, both for church and palace was practical in the extreme; was inevitable from the Italian preconception. The structural mass was raised with all the baldness of stability and the architecture—the pictorial form—was added as desire procured the means. This was the entire philosophy of the palace and remained so almost to the end; the symbol of the individual was founded in brute strength and pricked out with the changing and increasing superficialities of culture, until, before the end, the cultural fashion undermined the strength. The Romanesque palace was the fortress almost unalloyed, the stability of a cube, the maximum of wall, the minimum of opening; money, bringing safety and the social intercourse whose emulation might be in the extravagance of culture rather than in blows, was at its low ebb.

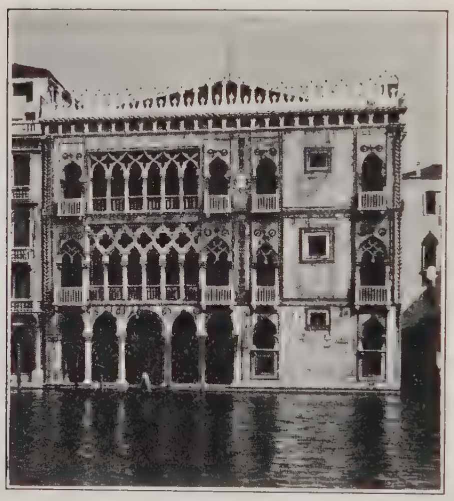
In the churches the traditions of the basilica reduced the baldness of the conception; the integrity of the mass was often threatened by the desired forms; stability might be incompatible with the picture. This was the point of separation between France and Italy. The northern Gothic was a direct development from the Romanesque through the experiments in structure; Italian architecture did not develop in its conception of structural necessity beyond the Romanesque and experimented only with the picture. Where the laws of structure intervened and threatened to destroy the vision, the Italian preferred to hold his vaults and arcades together with evident iron tie-rods, rather than pile the needful weight of stone into the proper counterpoise. Even where the contradiction was not so blatant, the idea persisted. Apparent structure often did not indicate essential structure. The method of core and outer covering was continued in some localities and, already, in many of the older churches, we find the west front carried upward in a single broad screen wall, to a flat gable with no recognition of the nave and aisles and the clerestory behind it, which formed the real building; we find arcaded galleries used as mere decoration against the wall, and flat arcades that are but modeling on the wall-surface to increase the effect of light and shade. What was never but an occasional detail of incongruity in the French Gothic was here the fundamental bias for the solution of the problem.

All the Romanesque elements which combined in France toward the formation of the Gothic, were present in Italy, were often sprung from Italian sources, but where, throughout France, experiment led to a cumulative solution that brought a dominant style, in Italy, the neglect of experiment and the restricted areas of concentration permitted the continuance of local characteristics which were as persistent in time as the waves of fashion were all-inclusive geographically during their shorter spans of influence. The architectural pictures differed almost as the land differed, but almost always they attained a beauty that was tuned to the beauty of their surroundings. We must remember this fact in all our criticism of the structural inconsistency. The pictorial faculty of Italy went very deep; it was the true expression of her fundamental outlook on existence; it was the greatest pictorial statement that western civilization has ever received. When the Romanesque was building, painting had not developed to express the desire for the picture and it was still architecture more nearly than any other art which permitted the Italian utterance. Already building had turned away from the full measure of its own promise, but in the direction of its preconception it was the forerunner of such immense attainment that we must withhold any too strictly architectural judgment. Italian painting became one of the great gifts of humanity to the future of humanity; Italian architecture, in its early phases, was an important factor in the achievement of the painting.

Italy had no hand in the final creation of the Gothic. As such, it reached her tardily and warped by the interpretations of the Germans. There was almost no structural

Gothic in the peninsula, no concentration and balance of strains, counterbalanced by flying buttresses. It is evident that the Italians did not understand and did not like it; the experiments of the Romanesque had led to results beyond their comprehension. The pointed arch was used and a modification of the vaulting system, but the principle was never carried to its logical conclusion of skeleton and windows. Not only the predilections of the builders but the climate worked against this. The sunlight was too strong and broad spaces were desired for surface decoration. Gothic detail remained an importation, another accomplishment for the picture-maker in stone form, a wave of fashion which became geographically inclusive to modify locality, but through which the local variety of the Romanesque persisted. The different sections of the country built very much with their old diversity of spirit, with their classical traditions hinting through the Romanesque and with the combination reglazed by the more fanciful variety which the Gothic motives, dissociate from structure, permitted.

The key to beauty was in the palace rather than the church. The structural inconsistency was not so evident where the fundamental cube retained stability and the decoration was so completely removed from its own structural significance that it became almost creation. Already the fortress was less grim, the walls grew lighter as they ascended, the openings were comparatively wider. Ranges of windows, arcaded courts and loggias humanized brutality without detriment to strength. Throughout the cities, everywhere, the change was taking place. Florence, Siena, Perugia and Bologna, among the many, still show magnificent examples, but the most evident beauty of the period was due to Venice. Here the fortress was forgotten in a graceful mingling of eastern feeling and northern form and Venetian spirit that achieved unity in its own sphere. Even here it was not true Gothic, the idea which it grasped was that of tracery. The palaces of Venice were reared on piles, edging the shallow canals which form her streets, and, flatness of wall, lightness of construction, airiness of disposition, were their characteristics. The openings usually were grouped toward the center of the fronts, arranged in stories of arcades and cusped pointed arches, with hanging balconies and marble insets, with perfectly structural tracery, so far as structure was required, and yet they were pure pictures, composed almost in the two dimensions of a painting. It is surprising that the dwellings of such business-minded traders, such implacable merchants, should have so much agility of spirit, although we can understand their openness in the security of Venetian power on the sea. Venice brought the spoils of barter, of treachery and war to found her city on the water which reflected it, a city rising with all the tones of the mists which also were of the water, a city of color and delicate form and splendid materials, an exquisite setting for the pageant of her adventurous life, intrinsically a setting, expressing no ideal beyond the beauty that life may show upon its surface.



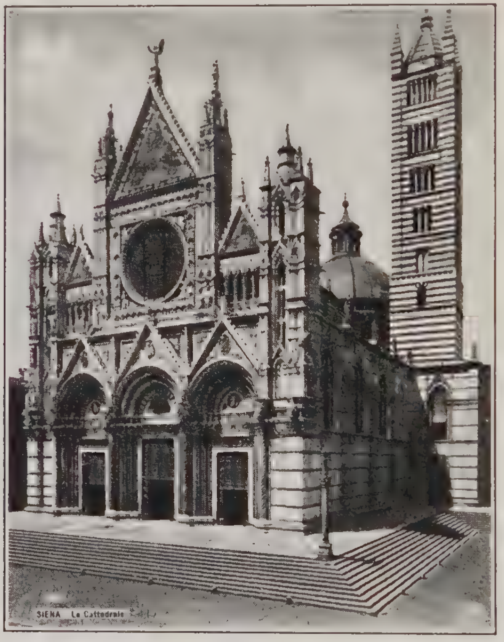
THE CA D'ORO, VENICE

Venetian Gothic is an isolated achievement. Almost exotic concentrations of great accomplishment are evident throughout the Italian architectural growth, yet subjected, nearly always, to the pictorial limits which bounded the elastic but all-pervading Italian personality. The individuality of place is evident among the Gothic churches. There are groups which we must mention because, although they developed into nothing, they have intrinsic or traditional significance and show some facet of the accidents in the general growth, or of its preconceptions.

In Sicily there was a curious compound of many racial elements; of the conquering Normans who had settled in the country, of remembered Byzantine, of attacking Moslem, of underlying Italian. The buildings are hard to classify as either Romanesque or Gothic and their pointed arches echo the east more probably than the north. They have a certain great basilican simplicity, a marvelous glow of color and mosaic; they show the readiness of the pictorial mind to admit the foreign; they remain an inspiration because in their own way they partake of beauty and any clue to beauty opens a pathway of untold possibility.

The cathedral at Milan is an almost unique production, peculiar in Italy in having a closer resemblance to structural Gothic. Its conception was German, but its spirit is Italian. It has the faults of both and yet a beauty of appearance from the quality of material, an impressiveness from its vast size and the well-adjusted sizes of its parts, an exquisite lacelike realization of pinnacle and tracery that make it seem a phantom among buildings. Its actual value, as architecture, is not great, but it always has been able to impose upon beholders a sense of greatness; its significance to us, again, is in the Italian willingness to admit the possibility of copy.

Between these two extremes, Italian Gothic followed a double course, consistent in both with the pictorial effect. Either it wrought its pictures in its own materials, or created surfaces for painting and mosaic,—for painting, rather than mosaic, as time progressed and the commercialized point of view desired to cover as much ground as possible with the least expenditure. The result helped painting, but the supreme and final beauty of the painting did not contradict the niggardly conception of the architecture. As structures, most Italian Gothic churches, particularly inside, are barren and somewhat bleak. They lack the French uplift and depend on another art for almost all the beauty they can show. But, among some lesser, there are two tremendous exceptions, the cathedrals of Siena and Orvieto. Here, all that material and embellishment could say was said in bandings of colored marbles, reliefs, mosaics, frescos. The fronts of these two buildings have little



FRONT OF THE CATHEDRAL, SIENA

organic relation to the facts behind them, but they are astonishing compositions of color and texture, of light and shadow. They are exalted conceptions in the manner of a goldsmith, they are the dreams of a painter eternalized in materials that will withstand the weather and yet not seem able to do so. They are exaggerated in their intricate delicacy and yet make the beholder catch his breath in wonder at the mass of human ingenuity which they display. They are altogether human although they flaunt all the imagery of religion. Less Gothic than Milan, less architectural than almost any architecture, they epitomize the Italian spirit at its most flagrantly spendthrift moment. They are prodigal with the methods of all the arts, unified in the manner of one, of painting. It is easy to criticize their inconsistencies, but we could not create another like them with all the wealth at our disposal.

If we turn from these to mediæval Rome, we find that in spite of the general Gothic domination, there was a negation there of even the pictorial reaction from the Gothic. Rome was barricaded behind her traditions and when she built at all, continued the basilicas of the old type. Among the almost four hundred churches within her limits, only one is Gothic, even in outward form, and this one is so bizarre, as Gothic, so barren and uninteresting that it seems to have been erected as a thing to be disdained. Christian Rome was squalid among the ruins of pagan Rome. The center of Christendom was withdrawn from all the greatest expression of the Christian ideal she had propagated and claimed to dominate, was waiting for the resurgence of the pagan spirit to deck herself anew. Her past was too much for her, has always overhung her present. She was too steeped in her origins to feel any urge but that from her own old ghosts. She had driven a great ideal power over Europe and the world, but she, herself, could express its material demands only when they came to her garbed in pagan form.

The definitely stated pagan reservation of Rome was often hinted throughout Italian form outside of Rome. We have emphasized, in Romanesque and Gothic, the all-absorbing pictorial tendency and the willingness to copy form; we have insisted on the beauty which resulted in many cases to palliate the loss of architectural integrity. Now, we must realize the lingering classic element which had survived to infuse itself into the picture in spite of growth beyond itself, and in spite of the Gothic fashion. The Renaissance was always just beneath the skin of Italian architecture, inherently so because the pagan and classic had never completely died away. The curiosity of the Renaissance was to turn back to the older Roman; the rediscovery of the antique was, in reaction, to spur forward the curiosity, was to fix the complexion of some of the further seeking. All this was to happen because the thread from Rome had not been broken. All that was fundamentally classic and not pose in the final Roman fashion was in the survival, not in the resurrection.

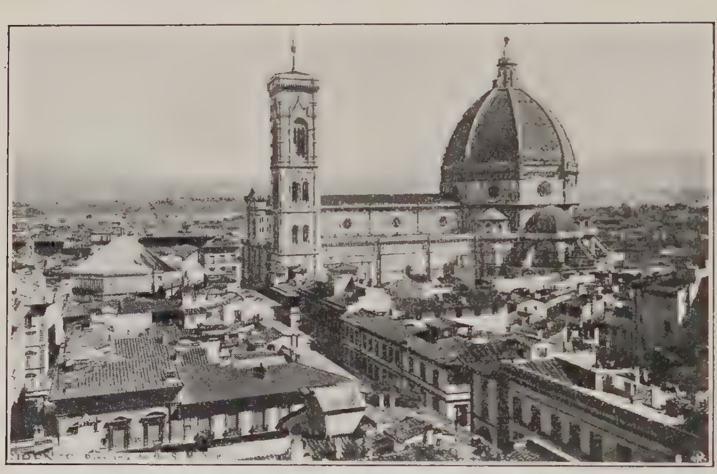
The most apparent evidence of this was in the persistent horizontal emphasis which no fashion consistently could dominate. The measured impression from level lines was almost always present. In this was the lack of aspiration sympathetic with the Italian feeling in its reaction toward the ideal; and both architectural form and cultural point of view can be traced to the same classic heritage. All the Gothic structural vertical was suppressed; the pointed arch was often flattened and so grouped and enframed in panels that it ceased to carry the eye upward. The round arch was never altogether discarded, and in the cathedrals of Orvieto and Siena the clustered shafts which lined the doorways were not slender columns carrying arches, but mouldings, almost of Roman outline, sweeping around the entire openings and scarcely broken by the suggested capitals at the levels of the arch-springs, which continued as horizontal bands across the fronts. Even the vertical of the towers was negatived. Sometimes these were round, more usually they were square, almost always they stood separate from other buildings, were without spires and were arranged in superposed levels of arcades, that bound them to the earth. They were definitely bell-towers and lookouts, did not state ideas beyond their practical purpose, their message was for the people, not for heaven. The Florentine tower designed by the painter Giotto epitomizes the Italian point of view. It is square, a little ungainly in its lack of taper; it has pointed arches, Gothic tracery, Gothic detail; it has the Roman, Byzantine, Italian marble casing. Each side is treated almost as a rectangle of panels on which geometric figures and sculptured insets are spaced in a design. The level stories and the sizes of all their parts are carefully adjusted so that the higher ones may catch the eye with the same force as those nearer the ground. There is the utmost consideration of optics but no uplift; the entire structure is definitely a picture, tuned to please the pictorial sense alone and when it was reared, painting itself already had gathered power, through the genius of this same master, Giotto, who built the tower, to dominate all manner of artistic statement.

It is hard to appreciate all the Italian architectural influences at their true value. The pictorial desire, the acceptance of foreign form, the classic survival, were all interacting. In one sense, both the pictorial and the copy were part of the survival, in another the indifference to the provenance of form which imported Gothic, might be but the apathy of creative imagination suspending direct growth until complication permitted the recrudescence of the natural Italian, through the classic Italian. The first enthusiasm of the Renaissance seemed to grasp upon something very fundamental; created the most characteristically Italian beauty, had the promise for a moment of the final architectural fusion of fashion, of structure and of picture. Italy, for just that moment, seemed to be on the brink of an achievement toward which all her past had aimed. There was no pose in the first turn backward, there was no negation of what had been worthy, to Italy, in the preceding centuries; there was no sudden upheaval. The possibility of the Renaissance was the possibility of steady growth, of the consistent flowering of long operating causes, which might have brought expression of a supreme humanity.

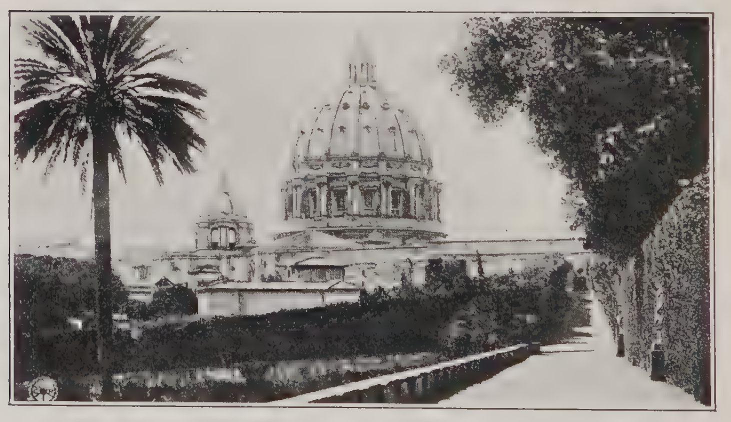
In 1294 a new cathedral was begun in Florence, conceived in Gothic form and vast in its dimensions. The great vaulting bays were square and were only four in number; the nave ended in an octagon from which apsidal choir and transepts were to open. The growth was slow and the vaults were not erected until 1357. Then came a question: "Was completion possible? How was the great octagon, whose diameter measured one hundred and forty feet, to be roofed?" If the original conception had looked to the final end, the solution had been forgotten and it was such a problem as the Gothic had never met. We are told that someone suggested, and seriously, that a huge mound of earth be heaped within the octagon, moulded to the desired shape, used to build upon and, when the dome was finished, carted outside again and dumped. The work was halted in uncertainty until in 1417 a public competition was proclaimed, offering to him who could satisfy the city of his ability to complete the dome, the place of architect. At just this point we step from the Middle Ages to the Renaissance, to the beginning of modern times. The gradual change was focused. The individual creator who had been waiting behind the scenes, had come to the footlights, henceforward would be paramount to tradition. It is significant that the man who won the competition had been to Rome, had concentrated the surviving tendency of the classic in a study of the ancient monuments, had gathered, beyond that, the spirit of the new future in its backward look to the very old. Filippo Brunelleschi was the first architect of the Renaissance.

We must consider for a little this moment in architectural development. Brunelleschi was not the first name among Italian architects, for we have records of several of his predecessors, but he was the first architectural personality. He was not the creator of Renaissance architecture, but he was the first individual in Italy to mould style where his predecessors had been moulded by style. A fundamental cultural change, no matter how expressed in personalities, cannot be created by personality; it must have roots far deeper and the growth of generations; it must come as the adjustment to essential facts, moulding in many different ways. The work of Brunelleschi focused the architectural change at the moment in the more general cultural growth when focus of expression in the new direction became possible, and so much of the new was woven into his creation that his accomplishment had the complexion of new rather than of old. His genius was so truly creative that it possessed all the possibilities of fusion between new and old and between use and picture; possibilities which the centuries that followed did not fulfill.

We cannot call the dome at Florence either Gothic or revived classic. The fact of external dome was Roman, the structure of this example made it resemble a gigantic Gothic vault resting on eight great ribs and sixteen minor ones, the result was beyond style both structurally and pictorially in its originality. For the first time in Europe, the dome became an immensely significant external feature, a great symbol of civic unity, hanging above the city which, in spite of its constant turmoil, had united in the desire that its cathedral should surpass all others. The great curves swept upward to a delicate pavilion which bound the whole together and crowned it with a feeling almost of aspiration. The enormity of the simple mass might have



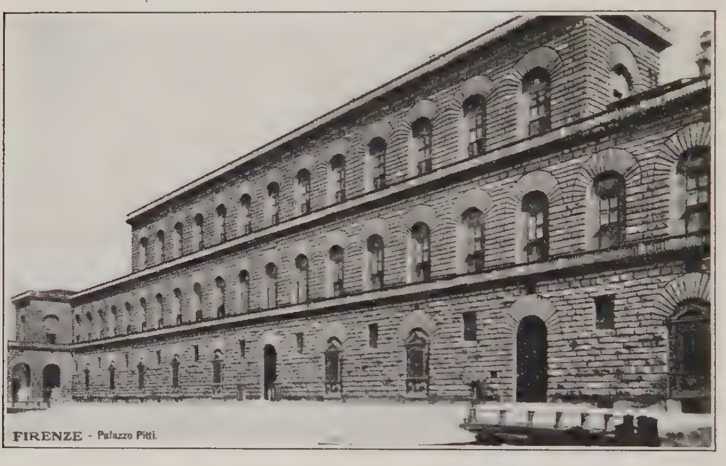
THE DOME OF THE CATHEDRAL, FLORENCE



THE DOME OF S. PETER'S, ROME

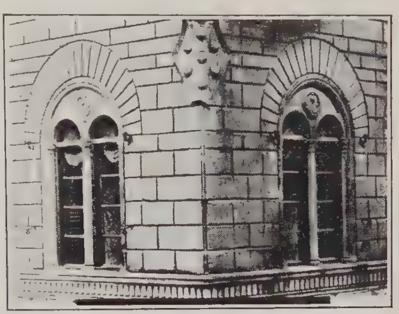
been insignificant had it not been for the splendid realization of scale in the details of this pavilion and in an arcade, masterfully conceived, which was to encircle the base of the dome itself. Brunelleschi did not live to see the arcade finished. It progressed slowly and, in another generation, Michael Angelo, judging architecture by his own unarchitectural genius, was offended by just the delicacy whose contrast made evident the massive scale. He called the gallery a "cage for grasshoppers," and from that day to this it has remained unfinished. The story is illuminating. Renaissance architecture was inaugurated in the dome of Brunelleschi; it was to reach its climax for religion in the dome of Michael Angelo: it began as the most fundamental architecture which Italy had ever known; it was to end completely as a picture. In Brunelleschi, the individual was still the spokesman of the mass, for, notwithstanding the original genius in the form, the content of the dome was the content of the mind of Florence; in Michael Angelo, the individual, however great, became the spokesman of himself and was to bring the closing formula. It is a curious fact which cannot be escaped that the freedom of the individual did not, in the end, bring increase of architectural originality. The shallow genius of the average artist was to crystallize the will to copy for the future.

Brunelleschi was most dramatic in his religious conception of the dome, but he was equally great in his individual conception of the symbol of individuality. He designed the Pitti palace, also in Florence, which was so simply structural that its structure could be taken for granted in the impassive strength of the fortress which to some extent remained, but here the fortress windows were opened into round arches, rising from horizontal classic mouldings between the stories. These things and the heavy rustication of the stone joints were almost all the details, but there was an impressiveness of mass, a simplicity in the repetition of simplicity, a frankness in the meeting of requirements that showed the hand of a master. The Pitti had separated from the Gothic, but it was unlike anything that was ever done in antique times. It was something new, something very honest and altogether expressive of the Florence which, in the first enthusiasm, culled the best from the fruits of Renaissance discovery.

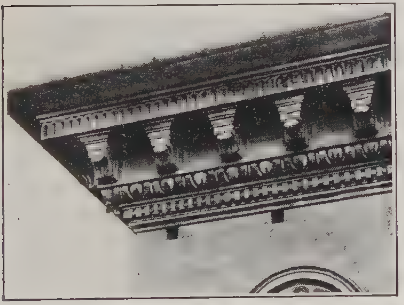


THE PITTI PALACE, FLORENCE

Brunelleschi did not stand alone; there were others with him and immediately following him. Personalities crowded fast, and yet the Florentine palaces were erected into a type, which is best illustrated in the Riccardi and the Strozzi. The Riccardi, home of the Medici, was the work of Michelozzo, with, it is said, some influence of Brunelleschi. The Strozzi was designed by Benedetto da Majano and Cronaca. Both were great cubes of masonry, rising in three stories, heavily rusticated below, less so above, so that the walls had the appearance of increasing lightness. Stringcourses—separating groups—of classic mouldings marked each story at the level of the window sills and emphasized the horizontal. The windows were round arched and were subdivided by a sort of tracery which combined two smaller arches springing from a central colonnette. Crowning each building was a deep and overhanging classic cornice. All the architectural functions which we outlined in the beginning—of base and shaft and crown, of expressive usefulness of form, of economy in the beauty of the shapes—were recognized. These palaces of Florence were severe, almost forbidding, could withstand attack if necessary. All the delicacy was within them, in the magnificence of the painted chambers, in the arcades of the central courtyards. These buildings retained the essence of the pictorial desire, but here it was in no way incompatible with the simple structure; and the forms were not used outside their true significance. As yet we do not find the exact Roman orders. The columns were evidently classic in their feeling and in their mouldings, but the capitals had a freshness in their mingling of motives that was usually original and often beautiful. We cannot reiterate too strongly that the first moment of the Renaissance was po-



WINDOWS OF THE RICCARDI PALACE, FLORENCE



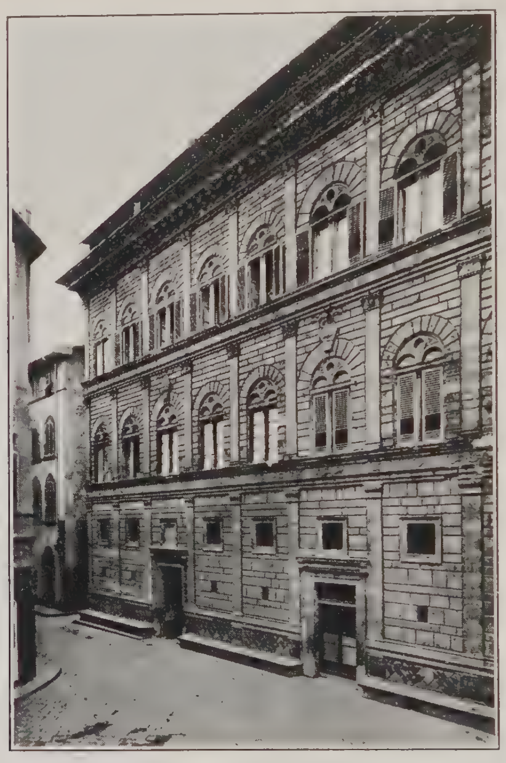
CORNICE OF THE RICCARDI PALACE, FLORENCE tential of every grandeur of achievement; was balanced between potential grandeur and potential tragedy.

And there was an element, beyond grandeur and denying tragedy, in the statement of the Florentines, which contained more pure beauty than the massive architecture, and was perhaps the surest meeting ground of all the excited yet intellectual arts of Florence, was the expression of the very heart of the beginning Renaissance. In the smaller and more fancifully decorated compositions, architect and sculptor, worker in terra cotta and the ever-present painter whose mind dominated them all, mingled their best powers. The results were often so exquisite in their harmonies of shape and color, so marvelous in their workmanship, so structurally logical in their conception, in spite of preconceptions, that they will always remain among the world's little masterpieces. Columns and arches, chiseled friezes, marble panels, beautifully realized figures, combined the best that Florence ever had to say. There were dignified and loving tombs against the interior walls of churches, rich pulpits, fountains for holy water, splendid balconies; there were panels in circles and squares enclosing rare design to adorn the streets from the buildings which they decorated. We call them minor works, but they were very great in spirit, had all the great first spirit of discovery, had all the beauty of the Renaissance, none of the formalism which contradicted progress. They were symbols as was the Gothic, were as ornate as anything that had been Roman and, with the striving of new curiosity, they had a quality of measured perfection that an ancient Greek might have felt was kindred to his own.

The Italian tendency to make use of foreign form, up to this point, had never brought strict copy. The Gothic had been imported, it is true, but it had been accepted because its spirit had found some echo in the Italian spirit and, once accepted, had been modified to fit the Italian spirit. If we admit the fact of picture, Italian Gothic was no more superficial than was this first reversion to the Roman which clinched the still living classical tradition and mingled it with all that truly expressed Italy in the Gothic. The generations of his nameless predecessors had hinted the possibility, but it took the genius of Brunelleschi to make the fusion evident, and even he could not always do so; it would have taken more generations of men as great as Brunelleschi to have realized the gleam of architectural unity which he had promised. Much of the danger, as events

MADONNA BY ANDREA DELLA ROBBIA

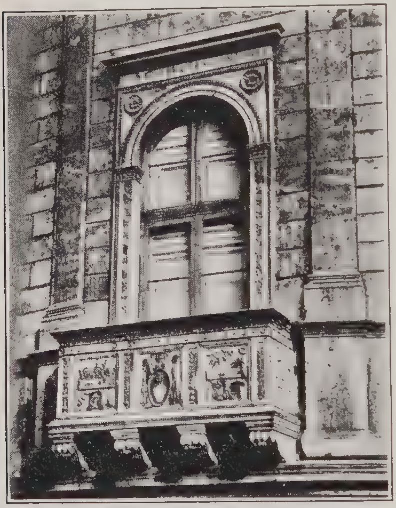
should prove, was in the individual. The method of copy became precise, left all analogy of spirit to be founded on the exact measurement of definite examples, was to be erected into strict formulas which should precede conception and control design. The tragedy of Renaissance architecture was concentrated in the circumstances of its first focus.



THE RUCELLAI PALACE BY
ALBERTI

It may have been that the influence of Alberti brought the first definite perversion which reduced the classical tradition to a fashion through the idea that the classic form alone was valuable, dissociate, not only from usefulness, but from every feeling that was not Roman. Alberti also was a Florentine, Brunelleschi's junior by a few years; he was above all else a scholar and a classic scholar who wrote a book on architecture, which in a less enthusiastic time might easily have been pedantic. Practically, he was not a great creator and his superficial point of view was evident, among other things, in the use he made of superposed orders of Roman pilasters to model wall-surface without symbolism of any strengthening function. Alberti's pictorial sense was elegant and graceful, his proportioning usually exact and happy; these, from a strictly architectural standpoint, were his greatest claims for recognition and against these we must balance the restrictions of his example which pushed forward the new expression along the formal classic lines soon evident as the lines of least resistance for the individual.

The excited discovery and acclamation of the Renaissance were Florentine, but the new information about the old had come from the Roman ruins. Now the tide turned to Rome herself. Men had gone there to study, now they were called there to create. Rome was ready to vest herself anew for a spirit had returned to earth that she could understand. Under a series of astonishing Renaissance popes, men who reflected all that was good and bad in the whole movement, men who were almost anything in the catalogue but exemplars of religion, Rome gathered the artists of Florence and the rest of Italy to recreate her outward mundane glory. Almost at once there appeared another dominating architectural personality, Bramante. His early work was mainly in Milan but he is known to have been in Rome by 1500. Bramante was the uncle of Raphael and had freed himself almost entirely from mediæval feeling. Influenced by Alberti and by the older Roman precepts of Vitruvius, he yet maintained the originality of his own talent. The palace of the Cancelleria, attributed to him, had conquered the Florentine picturesqueness of hesitation and here the stringcourses which separated the stories assumed the character of complete classic entablatures above the pilaster shafts. The windows were less the constructive expression of arches than they were decorative piercings of the wall-surface; in the second story they had semicircular tops, but the entire openings were enframed by rectangular and slightly projecting moulded panels. The window arches inside the panels had still a lingering respect for usefulness of form; they sprang from indications of pilasters, but throughout this building and the others which were comparable to it there was no regard for the fundamental relations between the spans of arches and of lintels. Apparent lintels constantly occurred wider than all the arches and were but parts of the continuous wall, put together of several pieces. Often the narrowest openings in the whole design were arched. Shape, line, the picture, was becoming everything; even the apparent logic of construction was no longer a consideration. The pictorial was ready now, not merely to neglect, but to deny the structure as Rome had done.



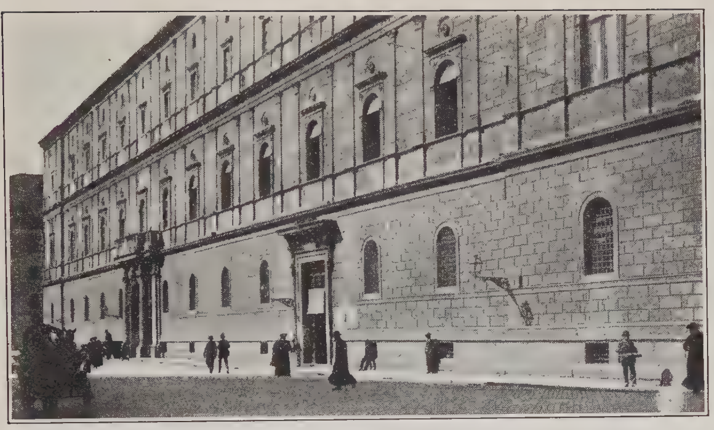
WINDOW AND BALCONY FROM THE CANCELLERIA PALACE

There is no mass of accomplishment as there is with Brunelleschi of which we can say, "That is the genius of

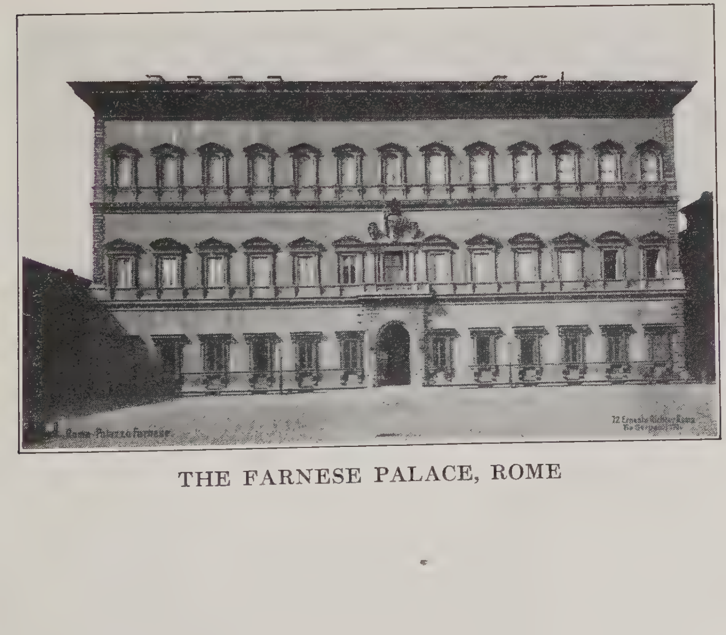
Bramante." His first great project for the rebuilding of the papal church of St. Peter was not completed; his influence has lingered as an inspiration greater than anything we can be sure he built would warrant, has seemed to fix the architectural expression of the Renaissance in its settled classic channel. We are not yet ready to emphasize our estimate of the architectural value of what was still a growing style despite its preconceptions; we must first follow its continued historic progress, its enthusiasm for itself and we must visualize the work of some few among the dominating personalities. It has been easy to accept the self-satisfaction of this recent period which has given rise to so much of our satisfaction in our own. It might be easy to revolt from its obvious faults and feverishly to condemn its influence, but a very different thing to build constructively on the ruins we might like to create. The path of Renaissance architecture was away from structural progress and away from the expression of ideal, but for the moment we must be content not altogether to contradict the greatness of which it felt so sure, remembering that great is a small word with many shades of meaning. The Renaissance believed itself great in all things. That it was so because of its sincere enthusiasm we can concede; that it could not rival the expressions of Greece and mediæval France its most ardent admirers must admit, for it had no conviction in ideal. We must bear in mind that any greatness of the Renaissance is secondary, that its nearness to ourselves in time still throws its significance out of due proportion; but we must also remember that its point of view had so imposed on our conceptions, that it cannot fail to enter into our own considerations. All this is parenthesis. We must return to the followers of Bramante, to the final Roman expression, to the individual greatness claimed for the personalities of the different architects, to the complete definition of the formula.

In narrowing our discussion to comparatively few among the best known of the masters, we are in danger of narrowing our conception of the magnitude of Renaissance production. The architects were many, their buildings multitude. All Italy was a puzzle of closely fitted city-states and principalities; all were seething with the new-found curiosity, with the wealth which was the gift of increasing commerce. Princes challenged one another in the magnificence of their prodigality. The invention of the architects was ever pushed to elaborate the pomp and circumstance, to prepare for the sculptor and the painter, to utilize the craftsmen of all the lesser arts. We can say that Rome became the center, that the artists usually gravitated to her, first or later, but, as the wheel of excitement spun with faster violence, their accomplishment was thrown far over all of Italy and formed other nuclei for expression. Everywhere there were palaces, rich dwellings in the cities, romantic villas throughout the lovely country—the fortress had relaxed its strength before the desire of wealth for pleasure. Churches, of course, continued to be built, with all the paraphernalia of Roman form arranged across them; they expressed their individual designers, not essential Christianity.

Perhaps the most clever architect who followed Bramante and felt his influence was the younger Sangallo. He designed most of what has been considered the finest Roman palace, the Farnese. It was Roman of the Renaissance in its mass and pompous opulence, Roman of the olden times in detail. There were no pilasters, but the windows of the upper stories were topped by classic pediments, each carried on two almost free-standing columns. Those of the second floor had lintels, those of the third had arches and the arches were made slightly narrower than the lintels. In the courtyard, by Michael Angelo, was ranged the arch order in all its glory of inconsistency, resembling the Roman Colosseum, some of whose stones were rifled to erect this very building. The passion to reconstruct the appear-



THE CANCELLERIA PALACE, ROME



THE FARNESE PALACE, ROME

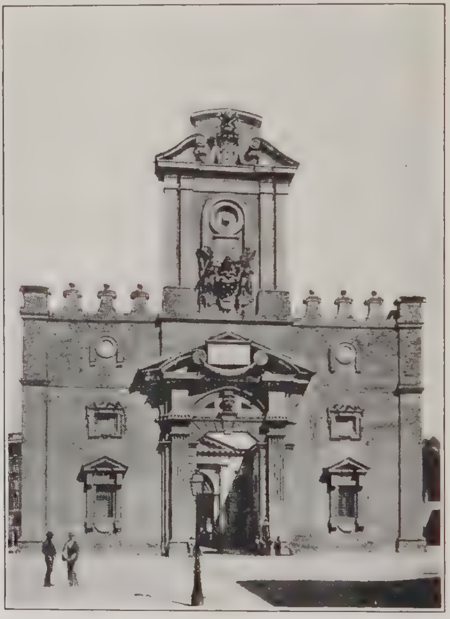
ance of classic Rome did not always respect the example in its ruins.

Vignola, who collaborated with Sangallo, hardened the concentrating copy. He has gathered increasing influence from his writings, from his tabulation of the old Roman orders into a new canon and into fixed proportions according to the method of Vitruvius, denying them the freedom which even in Roman times they had possessed. It has been an influence toward formalization which has been ever present in our buildings of today. Peruzzi was among the stronger personalities and Giulio Romano. The names and characteristics of the masters were carefully recorded and much of their work survives, attributed to the proper personality. The Renaissance, sincere in its enthusiasm, sincere also in its satisfaction, knew how to advertise. The exquisite giant of painting, Raphael, turned his hand to architecture, but if it had not been that he were Raphael, his architectural significance would not have been very great. In his work he was himself, but he was away from his own material and becomes interesting to us as an example of the artistic omniscience not only of the pictorial point of view but of that of actual painting. Because he was a master-painter, Raphael felt himself, and was thought by others, capable of solving any architectural problem.

Raphael, with the elder Sangallo and Fra Giocondo, continued the work on St. Peter's at the death of Bramante in 1514. This building was the gigantic culmination of Renaissance churches. It was the central shrine in the center of Roman Christendom and it affected all the vainglory of the pagan-minded papacy; it had left ideal to grovel beneath the heels of wealth. The design had many vicissitudes. Originally Bramante had intended an immense Greek cross of four equal arms, surmounted by a Roman dome, not unlike that of the Pantheon, but rising from a high drum with an encircling colonnade and crowned by a pavilion. Raphael changed the scheme to a Latin cross, probably because it was desired to enclose all the ground that had been occupied by the early Christian basilica, destroyed to make room for the new magnificence. Peruzzi and Sangallo had still other schemes. The walls and arches rose slowly, the fabric was altered to fit the changed ideas and the work was altogether interrupted when, in 1527, Rome was sacked by an army of northern mercenaries. In 1547, Michael Angelo was appointed architect. The most tremendous painter was to give his character to the most tremendous architecture. He returned to the Greek cross—the present length of nave was added later—and simplified the interior, where a colossal order of Corinthian pilasters loses all touch with human scale, dwarfs the puny men who gather there more to wonder than to worship, and dwarfs also the very vastness of the structure.

Michael Angelo's real contribution was the dome. It was pushed forward during his lifetime and was finished after his death from the model which he had made. It is the most celebrated dome in the world. Its curves, rising from a drum buttressed by columns, dominate Christian Rome. It is a marvelous picture kept in place by constant labor, for structurally it is far from perfect and ever seeking to destroy itself. The heavy ribs which should uphold it are mere external decoration and their weight is crushing. Michael Angelo's whole power went into the form he had conceived; he was a painter whose mind worked in terms of line and masses, not in stability, and his dome has rather aptly been said to be one of those vast mistakes without which the world would be immeasurably poorer.

The frame of mind which in the dome brought structural weakness, created example through lesser works in two directions; led to an enlarged rehabilitation of the orders and to a pictorial freedom in the application of the formulas which became a dangerous loophole in the hands of lesser men for the degradation of even what integrity the formulas possessed. Michael Angelo made from the idea of pilasters an imposing frame for the palaces he built on the Roman Capitol. Rectangular piers with Corinthian capitals rose through the two stories of the structures and carried complete entablatures above which were balustrades. So far the logic was exact, the copy of Roman detail absolute, but the filling that was used to make the walls and surround the windows between the piers was a combination of small classic columns and pilasters, of arches and pediments, that was purely decorative. There are others of his lesser compositions that are no more architecture than the supports and mouldings the master painted in perspective among the figures of his Sistine ceiling. Michael Angelo was the Hebrew prophet of the



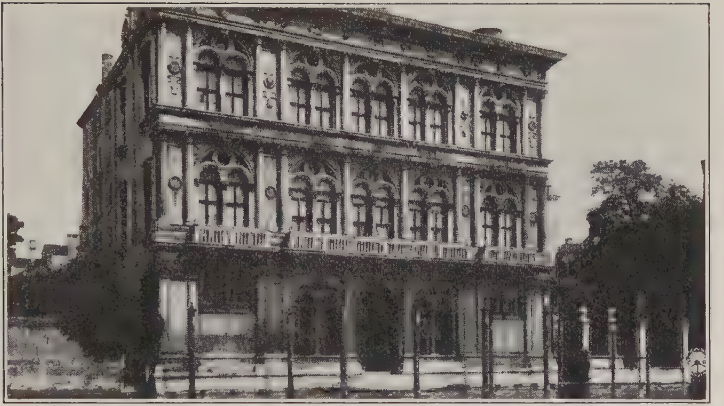
PORTA PIA, ROME, BY MICHAEL ANGELO

Renaissance. He proclaimed the spiritual exhaustion which, indeed, did follow, but what he dreaded for the Italian spirit he was helping to accomplish through the vagaries of architectural form incorporated in his legacy to a future that was prone to copy.

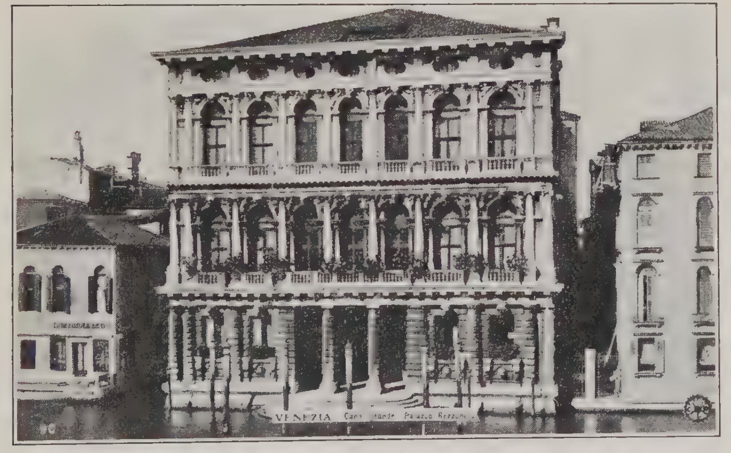
We must remember in considering the masters that they were but the climax of accomplishment for those who were less than masters; that they were inspiration on the one hand, or focus of achievement on the other. Everywhere the combined power of the individual—except for vagaries—was concentrating on the exact classic imitation and the unity that was missed for lack of a racial consciousness of ideal, was replaced by a similarity inherent in the creative poverty of the average individual and strengthened by the limitations of the material to be copied. The idea was more and more established that a building, to be architecture, must have an order or, rather, must be an order. When it was impossible to stretch this high enough, a story was added above its cornice and called an Attic story, from some imaginary recollection of old Athens. It was enough to wake the long-sleeping Greeks in protest.

The neighborhood of Venice, who received the impulse late and then exaggerated it, was filled with orders so overdone that there was hardly room for walls between the columns and even the beloved subsidiary arches were reduced to less than their usual insignificance. The Venetian city itself escaped just this weight of order, probably because the natural lightness of her foundations made difficult the necessary thickening of the walls. The old flatness of surface was usually maintained, but the arch order was omnipresent and was made to exert its utmost powers of decoration. In the Vendramini palace it retained the manner of open tracery and had a certain individual picturesqueness; in the Library, in the great stretches around the Piazza, in the Pesaro and Rezzonico palaces, it had an opulence of columns and arches and sculptured figures to fit the spandrels that could only be imagined by the spirit of a painter designing a grand background for a pageant. The names of Venetian architects are not among the most illustrious and the man who had the most lasting influence was not Venetian, but from Vicenza, a subject city. Palladio was not a genius, but to some extent he was a thinker. He had an adequate sense of mass and composition, some little feeling for apparent structural propriety, the usual predilection for strictly classical form. The combination of arch and column which he developed still bears his name and has so become a part of our architectural vocabulary that it makes him worthy of mention.

Indeed, our architectural vocabulary is largely what the Renaissance has made it, for the frame of mind with which we look at architecture was created for us by the Renaissance, making easy a certain type of copying design, but piling up high barriers against fundamental architectural progress. The gradual fixing of the classic forms into ever more definite copies showed the complete separation of architecture, through the will to copy, from the significant lines of intellectual advance which, already, were groping toward the future; showed, also,—or brought,—the death of real inventiveness and when, in the seventeenth century, all restraint, even of formula, was thrown aside by men who chafed at limitations, the excesses of the Baroque produced little but ugly and tortured extravagance; curving walls, serpentine rooflines, twisted doors and windows, masses of unarchitectural decoration, anarchy of form, discord of proportion. The spirit of Italian architecture, liberated from all symbolism of ideal, had been too confined by the classic facts which it had thought ideal, followed the suggested vagaries of Michael Angelo and reveled, for a moment, before formula closed down again, in a license which brought architecture to its lowest degradation and which is the most striking example



THE VENDRAMINI PALACE, VENICE



THE REZZONICO PALACE, VENICE

in all the history of art, of the hideous failure that is inevitable when all structural and artistic laws are violated.

We have continually emphasized the element of copy in Renaissance architecture. Perhaps we used the word copy somewhat loosely and made it stand as synonym to formula. The connection in Italian work was very close, but in general need not be so, was not so in the work we found in Egypt. The Egyptian formula was one of ideas whose expression was satisfied by a type of shapes, fixed in the idea, made traditional by rule, but not necessarily reproduced by actual observation of preceding shapes. The Renaissance formula was one of shapes without ideas. It ceased to have the complexion of continuing classic tradition, whose growth it swamped, and depended for its forms on the reproduction, on the exact copy, of definite Roman detail. It did not stop at this point, however; the architect was relieved from his obligation even to observe his model; the Roman details were averaged and reduced to types more strict and more available than any models. It was in this that formula pushed beyond the scope of copy and it was because of this that even apparent logic so often was discarded, that even the beauty of form was lost. Architecture became mere scenery; sometimes dignified, ordered, well-proportioned; often written about, argued over, admired; always stagnant.

Almost all criticism that could be applied to ancient Rome is fitted to the completed Renaissance and the Renaissance had not the justification in natural growth which Rome could plead. The Renaissance made its own decision to be architecturally eclectic and superficial in the face of other and greater possibilities, and in the face of the truer and more resplendent flowering of its own painting. The architect ceased to be a creator and became a delver into the past, a mere correlator of facts, and yet, the Renaissance never reached its desires, never reproduced what Rome had done. The Gothic was disdained as barbarous, its examples thrown aside as worthless, but by the time that it was quite eliminated the enthusiasm for antiquity itself was nearly gone. Perhaps for a single moment in the sixteenth century there was a balance, a poise, when the spirit was almost classic, but this was closely followed by exaggerated stiffness and then by the blind excesses of the Baroque. The reaction from excess was to even more unthinking formula than before and the idea of dependence on the past was fastened upon the future.

And the future in this case was our present. How we must stand in regard to the Renaissance inheritance is one of our great architectural problems. It is necessary first to push inheritance back into its perspective, to place it beside Greek and Roman and Gothic, making it a cardinal point of understanding that the personality of a race is greater than that of any individual. Greece worked with great racial spontaneity, but had the intellectual power to analyze and so perfected; Rome copied and created ostentation; the Gothic had spontaneity of mass production toward an ideal beyond analysis and could not reach completion. The Renaissance in Italy had a pictorial quality that was fundamental, but instinct and the reaction of rediscovery turned her back to copy Rome, who already had built on copy. Her awakened intellect did analyze, but analyzed dead facts, not growing organisms like the Greek, and while it analyzed it stiffened to the carrying out of pedantic rules which produced absurdity, instead of obeying fundamental laws that might have led to greatness. As what the Renaissance considered the perfect style progressed, the architecture deteriorated in interest and ended in confusion. Its greatest beauty, its greatest realization, its greatest promise, were at its beginning when it was a mingling of Gothic and classic, when it was logical and when it was growing. If we had time here to follow its development in France and England and even in Spain and Germany, we should find much the same beauty in the transition, the same loss of it as time went on and for the same reasons. Copy will not permit growth, individual idiosyncrasy cannot sway the imagination of a people, pictures are not real architecture.

The Renaissance has handed all that on to us. Largely we copy the forms it used, but now with our increased knowledge we sometimes copy the Gothic and the Greek. Usually at any rate we copy. We copy because the Renaissance taught us to copy, and the Renaissance copied because the creative architectural imagination had broken down under the dominance of painting and under the artistic poverty of wealth; had broken down because all creative imagination was waning throughout Europe. The intellectual development has continued beyond the exhaustion of the artistic. Architecture, indeed no art, is now a general vital concern. We cannot escape the point of view of the generation in which we live, but we are able to bring to bear a deeper power of criticism and to purify our own production from our more scientific dependence on essential facts. Renaissance architecture failed and died because it smothered its inventiveness, because it cut itself away from the really creative part of its inheritance. It was greatest when its forms were mixed. When it was hardened into a school and had declared its classic standpoint, it ceased to advance, ceased to charm, ceased to be significant for the thinking future. Greece and the Middle Ages we can never parallel unless new conditions of civilization set races again to thinking and working as races. The frame of mind of the Renaissance must to some extent remain our own, but if we are not great architectural creators, neither are we inherently pictorial and there is no longer any reason to design our buildings as pictures. We are at liberty to return to logic, to fundamentals, to structure, and there is a lesson, beyond its example, which the Renaissance can teach us, the lesson of its failure. The Renaissance put style above all else. It made a fetish of formalized combinations because the past had so employed the same forms. The result was degradation. Thinking clearly on the situation, we must take exception to the very foundation of the Renaissance proposition. Style is nothing, tradition is nothing, when it contradicts the logic of usefulness. Beauty is not beauty when it does not meet necessity. Greece and the Middle Ages produced inimitable style unconsciously, because masses were working to express the same ideals. The Renaissance copied style consciously, but failed to be convincing because style dominated matter. We cannot go backward to the finer past because the Renaissance has shown us the futility of just that thing, but if we are ever to go forward, we must throw aside the preconceptions of the Renaissance and discover facts, must treat forms as our servants, fitted to do our work irrespective altogether of whence they come.

CHAPTER XII

ENGLAND

ENGLAND has taken no part in the metaphysical definition of relationships; her action has been guided by no imposed ideal. England created her own standard in the development of herself; she has judged the world by England. The English good has been the possibility of realization according to the standard; the standard has been liberty; the method of realization has been self-control. Liberty without control is anarchy; controlled by the force which has dedicated itself to the perpetuation of liberty, it is the potentiality of the utmost that is human. Self-control is equally applicable to the individual and to the nation: in the individual it is repression of emotion, consideration of action, self-respect, reserve power; its result is responsible members of society: in the nation it is racial self-respect, increased power of combined action; its result is ability for national self-government, the right —if there be a right—to control others who cannot subdue themselves. The English reaction in face of ideal has been a question, "Will it work?" Where ideal has not promised realization, ideal has been abandoned for some more practical instrument toward the good. Action has been more potent in the making of England than any subtleties of logic; action has brought results; the results have insured liberty; liberty has reconstituted ideal.

England has not created expressive form. Egypt and Greece and France and Italy have been the image-makers, but form is not the only manner of expression and failure to create form does not predicate poverty in matter to express. Liberty postulates all matter and all manners of expression, but defines neither matter nor manner. The power to control liberty carries definition but little further; all the statement must grow through the manner of control, must be in the national life which liberty has realized. The matter of English statement has been the national symbol of English liberty, England itself, the hidden inner England of the imagination. Even the symbol remains vague almost as the ideal of liberty, the ultimate goal of expression which no one statement, no single generation, no century of generations, could grasp in its completeness. The symbol has grown through all the generations of English statement, coequal with the nation which has grown through all the centuries of English action. The symbol has grown through love of Englishmen for England; for England as a whole, the common mother who inspired victory and adventure in her name; for England in all her multitude intimate parts, for each nurturing share of earth with its sun, its mists, its trees and flowers, its animals, for every homestead which grew upon the earth and brought forth Englishmen, for Englishmen themselves, for the strength of self which grew from self-restraint, for probity among one's fellows, for law to regulate the larger interests. All the English daily action has been made expression, and the repression of control which fears emotion has been but the limiting restriction of the energy which has made love burn more fiercely. England, the symbol, has been expressed by all the love of all the generations of Englishmen for English things; is but the total statement of the best endeavors and desires of all the personal elements of action, for England and for themselves as they aggregated into England.

England, with the potentiality of her own culture, had also the necessity for world contacts; with her nationally bounded standard of liberty she remained open to world ideal; with her inability to create form, she was threatened by every wave of form-system that grew to express the changes in ideal. France and Italy originated the statements for the two world epochs during which England lived. Through their images we recognize conspicuous moments in civilization. England originated only the statement of her inner self; she has revealed the long life of a people's consciousness but through the images of France and Italy where she has dealt in images at all. Her demand for liberty was an innate quality of race; her fact of liberty has been won by determined opposition to imposed control; her expression of liberty has become her own through the infusion of English usage into foreign form. England received all the outside creations of world significance, whether of ideal, of action, or of expression; she received Christianity in its spirit and in its organization, she received feudalism and absolute royalty, she received the Renaissance and all the revolutionary effects of economic growth, but her spirit dominated imposition and had the power to transcend form. England the symbol contains few elements that were not bred of England.

We must square all this with history. The fundamental fact is Englishness. This was potential in the race and was deepened by the conquest of environment which made possible the nation. No other barbarian invasion so wiped away the preëxisting heritage of culture, no other modern nation began development with the same homogeneity of blood. It was necessary that the Latin culture should come—in that was all the immediate progress of the west. It came essentially in the train and in the guise of Christianity. In its first reaction this was an inspiration, not an imposition, its expression was from the people and for the people, its essence became part of their growing standard and added a more joyous certainty to the individual desire for liberty which had struggled beneath a somber fatalism. The power of love was added to the symbol.

The first imposition was Norman. It combined weight of king, weight of Church, weight of feudalism. For action, it was preponderantly weight of king who checked both Church and nobles; for ideal and for expression it was preponderantly weight of Church which sought to fix the hierarchies above the people. England as the world saw her was absorbed into the mediæval unities; as she might have seen herself, she was apprenticed to hard masters who taught her how to live in contact with the world, who forced upon her cultural things which she might or might not have taken of her own volition, but who could not prevent the self-development of her character and whose imposed concentration strengthened the determination of that character. Absolutism of royal prerogative was contrasted against fundamental liberty of action; complete subjection to the doctrines of organized Christianity was contrasted against fundamental liberty of thought; the imposition which created contrast furnished the racial English spirit with the very opposition which it needed to make itself national and pregnant.

Royal prerogative succumbed in face of the will for liberty of action and the struggle was not significant to produce expression beyond the action; the Church found a deeper hold and produced much of the evident expression which we acclaim as English. Here is a point for definite distinction. Mediæval England has been considered a very religious nation and was so. Much land was sequestered for her clergy; their wealth and influence were tremendous; their expression was magnificent and at its height was the most articulate expression in the land, but in its magnificence it remained the expression of the Church. The glory of religion which covered England was not the religion of the people. It was not the people but their masters who had given the land and power and wealth to God; it was not they but their masters who reaped the benefits. They were the pawns whose energy made England significant for king and bishop, until pawn became more than either king or bishop and injected his own spirit into the imposed statement. Once England, the fact, became self-conscious; once England, the symbol, was recognized in its potential beauty, the essence even of religious expression was tinctured by a personal quality of freedom which was incompatible with the doctrinal Christian unity, but which was not incompatible with the deep spirit of Christianity. Here is the crux of the distinction. The growing national consciousness searched beneath the imposed organization of religion to grasp the essential power of love, to place love of God tantamount to love of England, to vision the hereafter with the same confidence in self which guided daily action. The spirit of liberty opposed itself to both the imposed hierarchies; it crushed the one of action in which it found no inspiration, no common matter with itself; it sucked life from the other and learned some manner of expression, before it passed completely onward in its progress.

England's final confrontation of the Christian unities was in the Gothic period; its expression was in the Gothic form. As the Norman imposition had been absorbed, it had been renewed from France through the channels which Normandy had opened and England, as no other nation, was offered participation in the Gothic miracle. But this miracle was not in the heart of England and the balance of energy was not quite established; form without the essence could not create the complete semblance. English Gothic, beginning in the Church and the rich guilds of the cities rather than in the massed enthusiasm of the people, missed the last flower of aspiration until the people took it and then the aspiration was for England. The changed emphasis in the statement echoed the transformation in religion itself. There was a fundamental revulsion against the Church and its exactions centuries before the Reformation was declared in Germany; there was a demand for simplification, for rationalization, for an English rendering of religion, that was significant considering the definite English trend in other ways. Some historians have fathered all this on the shifting economic balance, have considered it but the demand that money payment for the grace of God be reduced now that the value of money was more practically understood, but the explanation does not meet all the factors. The spirit of liberty, of England, was crescent in many ways and through all imposition. Liberty of action had been won—Parliament had been created and had potentially superseded kingship; liberty of language also had been won from the old courtly imposition of the French—Chaucer had concentrated the English symbol of his period; it was but natural that liberty of worship should be desired, was natural without the economic pressure however much that may have increased or warped desire. Liberty of worship, however, was not yet recognized; in spite of the attempt too many interacting interests were still opposed for this, but the desire continued and influenced expression. The Gothic statement on English soil showed the steady decline of the omnipotence of religion over life, in so far as religion was the Church alone; it showed the steady emergence of England as the symbol of life and recognized the ideal behind religion to be coexistent with the symbol of the nation.

England emerged complete from the forced imposition of the mediæval unities. She was become a homogeneous nation at the summit of its potentiality for national things, but she was facing the economic problem which was now certainly concentrated if not apparent to alter the direction of the hard-won liberty and make it significant to the world. It may seem a comparison with little superficial similarity to liken the energy for expression of this national England, at bay before the international economic, to the energy for expression of Gothic France and yet the comparison illumines a real analogy. The ideal which France expressed was the Christian aspiration; her great statement came at the moment when her people were at their freest, when most could contribute to the massed statement of an all-pervading unity of spirit, came at the moment when the commercial impulse had gathered to shatter unity, came on the crest of the wave whose breaking should flood life into other channels. The ideal which England had struggled to establish for expression was the liberty of England visioned in the symbol of England; her great moment for expression came with the reality of freedom, when her people had absorbed or discarded the weight of imposition, when England had become inevitably English and could pile up the multitude of personal statements which only in their aggregate diversity could complete the symbol, came when she had conquered Gothic form and before her vision had been clouded by Italian, came when the commercial impulse had gathered to transmute the order which had won liberty, but before that energy had carried action beyond the sphere of English things and while it was strongest to inspire expression. The Gothic opportunity for France was the moment when

France combined within herself before the oneness of aspiration which was the unity of her ideal; the great English opportunity for England was the moment when England combined within herself before the personal diversity of freedom which was the unity of her ideal. The ideals differed, the manners of statement were opposed in the fundamental reactions of mass and individual, but the energies for expression were comparable because in both cases the supreme inspiration of a nation was stimulated at the supreme moment of that nation in face of its ideal, was stimulated under the balance of an energy which, beyond that moment, should overturn balance and tincture statement with matter beyond ideal.

England became her utmost self during the long end of the Gothic period when her spirit had ceased altogether to be Gothic in the French sense and when the final cultural imposition of the Renaissance which was seeping northward was still an increased freedom to encourage liberty. England became herself, but she was changing within herself. The economic reconstruction of western Europe was an imposition beyond the cultural—it was but accident that its progress was mingled with the stiffening Italian formula—and no power of national effort could check the commercial advance, however much the national character might imbue the resulting change with its own personality. England was changing and changing eagerly; the new wealth was welcomed by all who found advantage in it; the new expressive forms were heralded because they were not visualized as danger to English matter. It was a long moment during which the balance hung, during which the salvation of the English spirit of expression was in the fact that Englishness was deeper than the self-consciousness of individuals, and during which no imposition could live in England untransmuted. The English spirit was not a question of an individual, but of many individuals and many generations and of long environment reflecting through the massed individual that was race. The English spirit was not a question of genius, but it is significant of its power that genius, when it came, should always gather the manifold details of the individual elements into the concentration of the symbol.

But the symbol was changing with the fact, subtly at first and only very gradually with enough negation of itself to befog the essential Englishness. The first drastic action of the Renaissance did not imperil the ideal of England, but snapped the last link with the old imposed organization of religion. The break with Rome was not the consummation of the original popular demand for liberty of worship and did not immediately bring that liberty. The English reformation in its historic fact did not arise among the people; it was an economic establishment of worship in the interest of the growing power of the new economic masters. It did not supply new ideal. It did not change the character of expression because it destroyed nothing which remained in England significant to express; if it had effect, it was to increase the amount of the essential English statement in its unreligious inclination.

The danger for expression was in the growth of the economic beyond the interests of England. It was the economic which brought new contacts with the outside, whether it brought them in trade, in adventure, in conflict, or in thought; it was the economic which brought the Italian to England as a formula and which hastened the un-Englishing of the expression. Without the Italian formula the national statement might have continued its traditional manner with but the slow lessening of significance as wealth and its ostentation restricted utterance to the superficial things in which wealth finds satisfaction, but wealth imported the formula to England and produced a potential contradiction for expression which might ignore the English character wherever wealth could afford the Italian manner. The Italian Renaissance expression was welcomed to an economic England, but it was a more stultifying imposition than any the Normans had brought by force; it was an imposition, self-imposed by blind money which thought to buy the latest fashion and only succeeded in obtaining an echo of the will to copy.

The spirit of England awoke to the peril of its liberty and realized the defilement of its symbol. King, nobility, all the paraphernalia which fixed the weight of the economic change upon the nation in an un-English way, were cast aside amid a burst of action and of statement which reasserted freedom and which rewon freedom. Liberty of action was made permanent through a parliament responsible only to the people. Liberty of worship was made permanent beyond the bounds of any dogma and it is significant that the religion of the people which had produced no great statement of the Roman Church or of the economic church, found its supreme epic of spirit in the conflict with the economic and that the hero of the epic was man in the freedom of his will to attain the good. Liberty of thought was made permanent and has continued English, in amity with the economic where the interests of the nation have been commercial, often in spite of the economic where commerce has infringed upon the integrity of the symbol. Liberty of form was predicated in the general freedom, but England has not created form and in her inhibition she continued dependence on the formula with some revival of the characteristic English transmutation.

The tragedy in the situation, if the future shall find it tragedy, was that control by wealth, which had begun but as a means, became the essential, ceased to be an English problem or to be national in any sense: became indeed the apparent motive of the world's advance. The liberty of Englishmen, within the limits of commerce, has been asserted in its permanence and has been made freedom, within the limits of English law, for half the world; the power of commerce has continued to increase, regardless of all liberty, but where it has restricted, it has also bound the factors of civilization into a colossal structure. It may be that no other power could hold them juxtaposed to await the definition of ideal that is still promised by the modern curiosity. English expression in general has shallowed in its statement in just so far as liberty has bowed to the material; has remained significantly English in its detail, wherever the individual Englishman has reacted to the old symbol. England, the fact, could not escape a world movement; she has had the wisdom to bend the application of ideal to the inevitable and has preserved ideal within the economic. The liberty of self-control transcends circumstance; it may always contain the germs of significant expression.

The English standard has been liberty; the method of realization has been self-control. The matter of English statement has been England, the symbol of liberty; the quality of the statement has been that of the imagination of England acting through and beyond control. The control which may strengthen action tends to restrict expression; the control which is innate in individual or nation shrinks from the exhibition of emotion and avoids the dramatic in its relationships. In this has been the gulf between England and the southern races. It has hardly been a matter of degree, rather a question of real temperamental difference, strengthened by environment, if indeed environment was not the originating cause. There can be no implication of superior worthiness on either side; self-control does not necessitate moral grandeur or even moral rectitude; vivacity does not engender a laxity in fundamental things. It is not a question of the amount or character of the imagination; significant expression is not probable without imagination, but imagination is possible without expressive outlet. It is a quality which may be present in any man, is almost always so in children, but which experience often seems to blot away. Experience comes to individuals as they live their lives, but each succeeding generation must begin with an increased inheritance and it is thus that the imagination of a race or of a world may give way, crowded back by the facts of the advancing centuries until some new upheaval outfaces facts and sets the fancy free again. The individuals and nations that have remained significant for the future have been those that retained imagination in spite of facts and that expressed their imaginative concepts whatever the measure of their control.

The imagination of England has been as potent as that of Egypt, or Greece, or France, or Italy, but the control of England has regulated its conceptions into less obvious channels. It has remained more personal; its visioning has been more sacred to the individual, has been a matter of the inner self, has been a perquisite of the proclaimed liberty which denied the right of interference in thought and vision. In the individual the habit which controlled expression of emotion has restricted exaggeration of emotion in the imaginative concept. Respect for self has prevented annihilation of self in aspiration, even before God, has prevented perversion of self in any excited relationship with man. England could not have felt the communal fire of imaginative and symbolic religion which France realized; she could not have reacted to the frenzy of disillusion which returned Italy to the pagan, but England has had within her elements all the religious depth of France and all the humanity of Italy. The homogeneity of race and habitat has produced similarity in the individual self-control as it has produced similarity of standard. The control of Englishmen has made possible the combined action which established standard, but the liberty which, in a contradiction of words, is identical with control in fact, inhibited any selfless coöperation in imaginative concept or in its statement. The imagination of England and the expression of England have been the imagination and expression of

Englishmen within the limits of English things. It has been the unity of limitation which produced the fact of nationality; it has been the power and beauty of imagination beneath the control of the individual which produced the quality of statement.

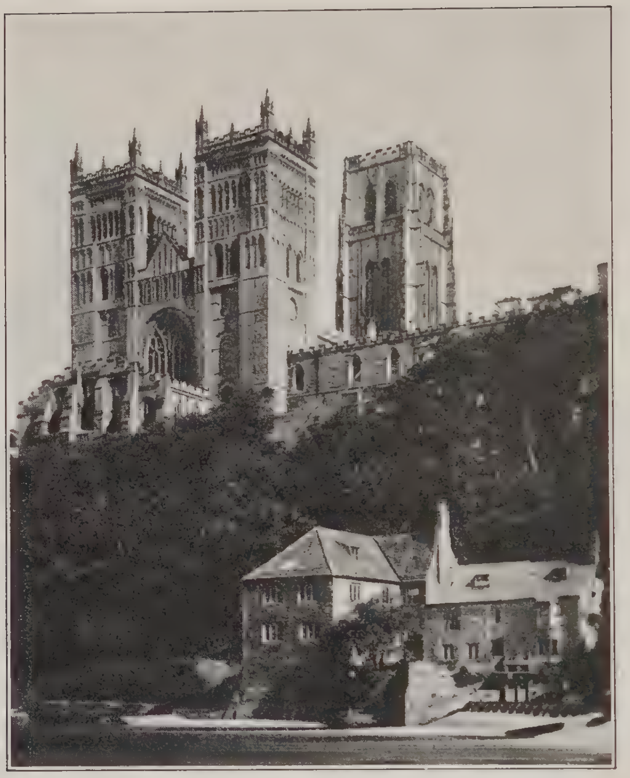
The expression of England has been as significant as that of Egypt, or Greece, or France, or Italy, but England has not created form. There may be no connection in origin between this fact and the inherent control of all exaggeration in statement, but there has been constant interaction. Probably the formlessness of the English concepts was in the climate and environment, was in the nature which produced England and which had not been essentially different in the ancestral lands before the conquest, except that it had been sterner and more barren. Certainly the English spirit softened and beautified in England, but it did not become either more sculptural or pictorial and there was nothing to make it so. The race had never lived among a nature of forms and pictures, but among a nature of narrow seas and mists and rolling greenness that led to contemplation, not of immense first causes—the desert breeds these things—but of nearer more intimate personal questions between man and man and woman and beast and earth and water; contemplation not of aspects but of character and of reaction to the desires and needs of man. Life was not an abstraction of relationships which could be stated in abstract form, and nature had not the definite relief or the clear atmosphere to impress form on the imagination; life was not a continuous pageant which could be reduced to pictures and nature had not the blazoned colors to force the imagination to create pictures; life was, rather, a multitude weaving of intimate action which depended on all the intimate contacts for its spirit; was ruthless, loving, practical, adventurous, or home-keeping as the individual was one or other, and nature with its indefinite contours restricted interest to the immediate and personal and reacted with the element of control to make expression individual.

The English imagination has created its concepts for the inner mind and not for the eye; in this has been the supremacy of poetry. No nation has so completely stated its intimate personal life in words as England; no other literature than the English has lived so long and with so little essential change in spirit. It came with Englishmen to England, was beautified by the new land and by the new religion of Christ; it resisted the impositions of Normans and of French, of organized Church and foreign language; it proclaimed the English symbol at the conquest of one imposition and experimented with another—out of Italy—only to become more English and more powerful; it met the shock of commerce and did not succumb; it has been the central stream of all the expression of symbol and, coming from the heart of England which has never failed, it has been the one expressive manner which has never faltered. English form has been bred from foreign fashion and has sometimes become essential England; English poetry has dallied with foreign fashion, has gathered suggestions that were above fashion and has always remained essential England. It has been personal because it has been the utterance of individuals transcending the limits of self-control; it has become national through the English similarity of the limits; it has become complete because it has echoed all the changes in the growth of liberty. Genius has concentrated its statement, yet the Englishness has not been in the genius but in the subordination of it to the spirit of the many individuals from which it sprang and who had not genius. Chaucer was genius and became all English; Shakespeare was genius and belongs to all humanity, but he also was all English in his interpretation of humanity. That he was the greatest dramatist certainly since the Greeks was in his individual power which transcended England, but it was the flowering of a power which we can trace, through the men and women he created in the image of the men and women England had created, back into the mists from which England had defined herself. Milton was genius and was all English, of a somber England which faced the extinction of her spirit and was strong enough to fend off the danger, but which had lost the old joyousness of England. Chaucer and Shakespeare and Milton were the great rallying points for the expression of the symbol, but they did not make the symbol and were not necessary to it. The utterance of every Englishman had part in England's symbol of herself, the verse of every poet added articulation, the concentrating mind of genius made it significant for a world which needed the English inspiration.

The poetry of England was the essential art of England. It stands with the sculpture of Greece, with the cathedral of France, with the painting of Italy to represent the creative imagination of a nation. In Greece, the point of view of sculpture pervaded architecture and added to its perfection; in France, the cathedral was architecture; in Italy, painting dominated architecture and contradicted certain of its essence. Greece and France and Italy worked naturally in form, from one direction or another, and the dominant manner of form postulated the architectural significance. England did not work naturally in form and the manner of poetry had no direct bearing on the architectural significance. It was the spirit of the poetry, as it stood for England, which might be infused into any form and which might gather the efflorescence of national action—transmuting action into symbol—and so state it in forms of France or Italy that the significance was altogether English.

England is scattered over with great architecture; few nations are so rich in their reminders of the past ages which have made them great or puny for the future, but these buildings on English soil were not always from the heart of

England. Alien thought and ideal have had their days of splendor as well as alien form, have been the masters of England in order to be the incentives to her liberty. It is the essential English architecture we must search. There was such and it was as significant as any architecture that has ever grown. We shall look for it during the time when England was most herself and within herself; we shall expect to find in it the expression of all the intimate personal English things that made the nation; we shall expect to find it growing from the needs of Englishmen and beautifying those needs with the English dignity of reserve in freedom. If the architecture in its garments of borrowed form can show us this, it will be a further revelation of the futility of form—which, borrowed, always threatens to be formula—in face of truth in usage and in face of fundamental matter to express.



CHAPTER XIII

ENGLISH ARCHITECTURE

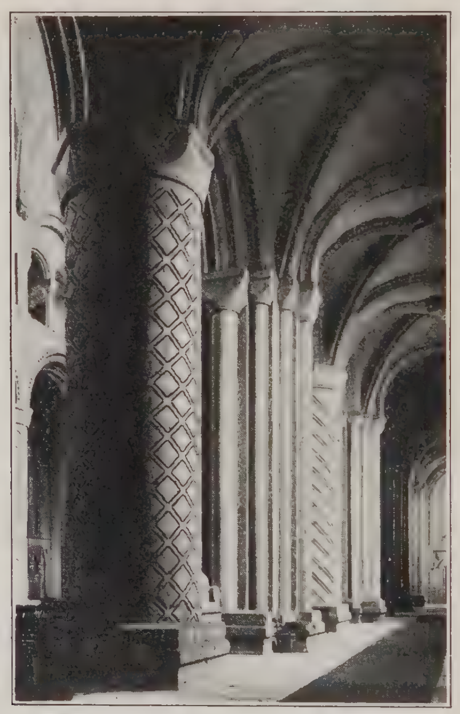
EUROPEAN architecture has woven a vast tapestry of form relations, the rhythm of whose design has never duplicated the units but in which the rhythm has been significant because each unit has been the outgrowth of many that preceded and because the subjects of all the units have been comparable in their reflection of some facet of man's attitude toward life. Each nation has built according to the possibilities of its inheritance and according to its own spirit; in so far as each has visualized its own ideal, each has maintained the individuality of spirit through the changing periods we differentiate into styles. National spirit has been constant in time, but narrow in geographical limits. Style has been restricted in time but broader in its area while the creative impulse of general ideal has lasted. All development has represented steady change in style and endless reaction between the nations. There has been constant shading in form and usage. Natural organic growth did not repeat because it was fundamentally working toward perfection and a building which might have been initiated as a copy by minds satisfied with the last step, usually on its completion had gathered all the possibilities of progress suggested by the model. Much of the beauty was always in the living quality of change, of searching toward greater beauty, until formula snuffed out creation. France and Italy evolved form-systems that became significant as style and were imposed on Europe. England evolved no style, her significance was in national spirit and for herself. She received the impositions of France and Italy and from them created English architecture. The possibility of English statement strengthened as the liberty of England strengthened and became remote as the commercial and individualistic tendency of modern thinking, bringing the surrender of thought in the desire to copy, hampered the consistency of production which might reflect the race.

There was almost a clean break between the architecture of England under the French imposition and that of England freed from imposition. This was due to no new stylistic innovations from abroad, but to the emergence of the English spirit through the old forms. The England of the Middle Ages had lived, superficially, like her contemporaries, under the weight of universal Church, in fear of the unknown, in the preparation of her soul for the next life. She had invested her gains in religion and her human units had protected their earthly bodies from neighbors whom they felt to be as predatory as they knew themselves to be, in castles where the architectural fitness was mere strength. All the real expression was religious and was not fundamentally from the people and their growing liberty. Then England conquered herself and rejected imposition. This was the opportunity for Englishness of architecture in spite of form. All the qualities which had been present only because Englishmen had done the building for masters who still dictated ideal, now were applied to the essential facts from which the English spirit had been born. Military as it was in action, it was a spirit founded in the home, in the intimate and in the personal. Once secure from the predatory, Englishmen left the refuge of an after-life to find more comfort in this on earth.

Luckily, the impulse of the Renaissance reached England very slowly. The types of home which were developed from the materials that already had been collected, were altogether English. We cannot say that no other possible combinations of form could equal them in fitness for the purpose, but none that have been used have ever done so. Historians are fond of calling the long period of production during the Tudor reigns, and even beyond, almost to the civil wars, the transition from Gothic to the Renaissance. Rather it was the great age of the truest English architecture, when the units of the nation were embellishing their most sacred spots and, in doing so, were creating a myriad symbols of the heart of England. The significance was not in the many residences of the new nobility of wealth, although even the ostentation of these could not break away from the general feeling; it was in the simpler homes on the manors and farms and in the villages, houses that grew almost as thickly as there were families to love the land. The significance was in their number and in the modesty of most of them. It was more racial than any combination to raise some vast monumental structure, for here almost every free man was erecting for himself and his posterity the thing that seemed the best to him. The result was a great congregation of individual symbols and yet each one might stand for England, because the English spirit was in them all. No other nation has so dignified its unpresuming inner life, has created so much all-pervading beauty of environment, or an environment whose human side was so in keeping with the nature it never contradicted. England seized her opportunity completely. It came as all such seem to come, at a moment of balance; it came just before it would have been impossible. Already the economic changes were shifting the homogeneous population into new classes, were threatening many phases of the life which the houses symbolized and, constantly, the new Italian imposition was insidiously finding an acceptance. If we must bind ourselves by the formulas of style, this era was, we must admit, a transition. The Gothic impulse from France had been digested, the Renaissance was gaining ground. These, if we concede the view of history, were the facts of style, but style is, after all, but the high point of an average. The facts may be true for the larger Europe, but for England it is more true that what had preceded this had been development, that what followed was decline. This was most nearly the true English style. In the thing expressed and in the manner and spirit of expression all that was foreign was suppressed by England. It is better not to say that the transition to the Renaissance was long and slow, but rather that for more than a century England could remain herself and could ward off the catastrophe that imposed another foreign manner.

No national spirit could continue to speak once the final viewpoint of the Renaissance was established. Founded on the theory that rectitude of architectural practice was in copy of form more than in adjustment to structure, and copy according to the whims of individuals trained as specialists, thus growing out of touch with more general interests, the formula passed to the other nations of Europe as copy certainly of the second generation, and often of even more remote derivative. The loss of accuracy, which might have been a blessing, was counteracted by continual reference to the original fountain. It did not need a journey; the formulas were now in books and spontaneity was doomed. The English spirit struggled manfully, but it became restricted. The growing classes in the scale of wealth evolved types of homes that were clearly separated in incentive, but which had all imbibed the need of copy. Then came the obvious application of the principle. If architecture was to be the reproduction of some set of forms developed in the past, and if wealth brought the freedom of individual choice, why should any one formula be used? Other forces were at work. In England there was a barbarian renaissance, just as there had been a Roman one in Italy, but on a much more superficial and artificial plane. It was the copy of the fashion of copy. Buildings that were called Gothic became the rage and finally arrived at a certain accuracy of reproduction. Then Greek form, being again available, came into vogue. Revival followed revival. Freedom of choice became complete, but it was a choice between formulas. Among all the styles, the client of an architect picked out the one that best suited him, or else, having decided on the style desired, much as he would choose a coat, he called upon the man whose inclinations and training fitted him to adapt the necessary formula. It was architectural chaos, but in it there was the possibility of advance. The principle of freedom in copy had been established, if only for freedom in the stylistic mass. It would have taken but another step to make the freedom absolute and reduce the copy to the individual unit of form. Add to this but constructive thinking, use each copied form in the structural manner for which it had been designed in the further past, and the principle of copy would have been caught in its own toils, would have obliterated itself in its own suffusion. That would have reestablished growth perhaps as significantly as the other modern principle of individual control of design would permit of growth. It could not have recreated a national expression because the completely economic society no longer thinks in the same national terms. Patriotism may be as clearly stated as before, more loudly proclaimed than it ever was, but it no longer means the same community of thought and life. And yet, throughout all the vicissitudes the English spirit never altogether died. At the worst, it always flickered here and there in some production and finally was recognized as a thing whose expression could be copied, could be inserted in the formulas. Conscious revival of tradition cannot recreate life, but conscious tending of tradition, that is but submerged under a foreign fashion, may revive it into a potent force, even for the individual architect, if that be destiny.

It is hardly exaggeration to say that architecture, as a fine art, began in England with the Norman imposition. The Saxon work had been so primitive that it did not predicate any evident development from within itself; certainly none is suggested in the few fragments that remain. The spirit which was to become the great significance had found no outlet in untutored form and even the spirit was still inarticulate as a national thing. Norman building attained a massive nobility equaled only in Romanesque France, but it was not from the vision of Englishmen whatever effect it may have had in guiding their appreciation and enlarging their constructive ability. It was the creation of a conquering class whose blood was hardly alien, but whose civilization was derived from France. The type grew simultaneously on both sides of the Channel and, if the work in Normandy had more constructive hints for the future, the work in England had become regal instead of vassal, was on a grander scale and produced more monuments of importance. Apparently all the Saxon cathedrals were rebuilt and many of the erections which replaced them still stand essentially unmarred, to attest the might of the Norman hand. Norman architecture was the statement of absolutism; was heavy, round arched, with thick walls and small windows and wooden roofs. Although vaults may have been intended, those that now exist were built later. The great piers were sometimes cylindrical,



INTERIOR OF DURHAM
CATHEDRAL

sometimes grouped into shafts, the deep mouldings were richly carved with a rude magnificence. Most of the churches were low and very long, gloomy in their revelation of the Middle Ages, in the impression of weight that emanated from them;—weight of dogma of religious dominion and royal domination. Such a building as Durham cathedral reduces puny man to an insignificance that he is almost too cowed to resent. Men made it, but they made it, not in the spirit of humanity, but in the spirit of the mediæval Church, made it for a just God, but One Who was prone to anger, Who was quick to judge according to the letter of His law, those mortals of His creation whose only hope was in the hollow of His hand.

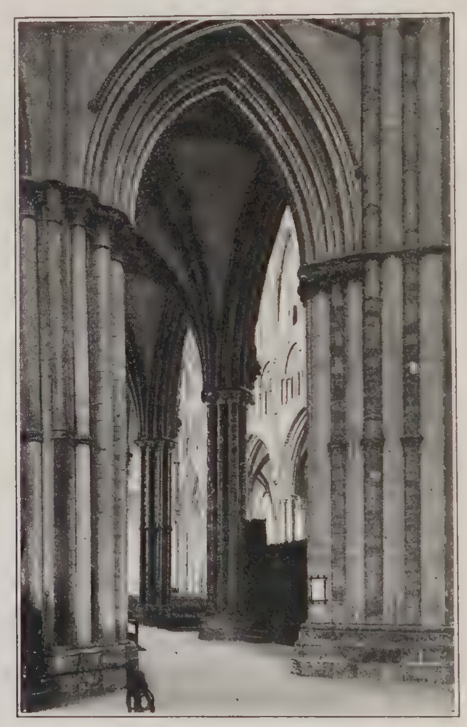
English Gothic did not develop altogether from the Norman work, but received its impulse anew from France. Apparently its first real application was at Canterbury cathedral, beginning after a fire in 1170, during the reign of Henry II. It was never the complete French system of skeleton and windows. The English builders were not experimenters in dangerous structure. They avoided the risks through which the French expressed their religious ecstasy, kept the vaults quite low and narrow, suppressed the flying buttresses and usually made the windows openings in walls of stone, not actual walls of glass. So far as they were Englishmen, they had a different thing to say and, with the coming of the Gothic, we begin to feel a hint of it behind the foreign importations. English liberty was possible. The language was awakening, the forces that were to grasp the government were gathering. England could never have created Gothic architecture and, once received, she missed the French fire of its enthusiasm. She had not the facility of utterance to express her whole soul even in an appeal to heaven, and, religious as she was, her whole soul was never in the matter of dogmatic heaven at all. The vicar of God on earth certainly found her obstinate, and she was very busy doing necessary things at home, making the earthly life to which she had been condemned more worth the living. That at least was real and immediate; perhaps a little of the other might be left until it came. Certainly there was a reserve in the English Gothic and a human note. If it did not scale the heights that it found so easy on French soil, if it was not entirely preoccupied in hurling messages aloft, at least it had the power to gather the message from above and make it human enough for the simple worshipers to understand. The spirit of this architecture became the same as that which made the first gesture toward reformation in England,—long before the real break came with Rome and while the French Gothic was still in all its glory,—an attempt to spread the words of the Bible, wrought into the English tongue, among the people who wanted to understand. Organized church and royalty martyred the reformers, but they could not eradicate the spirit which had been woven into the walls that housed religion and which, so far as they were English, was inherent in their own natures.

This shrinking from domination, even before the court of heaven, this insistence on individual humanity was very English. It is the most important clue for us in the use that England made of Gothic form; it was the unconscious expression of the pawns who worked for king and bishop; it could not openly gainsay the imposed ideal and we may accept the main structural solution as it was achieved in France. The first great difference was that the frame remained nearer to the earth. The aspiration was reduced, the conflict of soul and matter was quieted and a great vista was opened almost of contentment. Beyond that the unity of the aspiration was broken by a greater complication of parts. There was no apse and there were usually two sets of transepts which diversified the mass and added picturesqueness. It is the first time that the word has become significant to us. It will continue greatly so in the

SALISBURY CATHEDRAL

LINCOLN CATHEDRAL

English work. In the cathedrals it means no lack of symmetry, but it indicates decreased formality; its quality is individual and human, not organized and divine or royal; it is superlatively English.



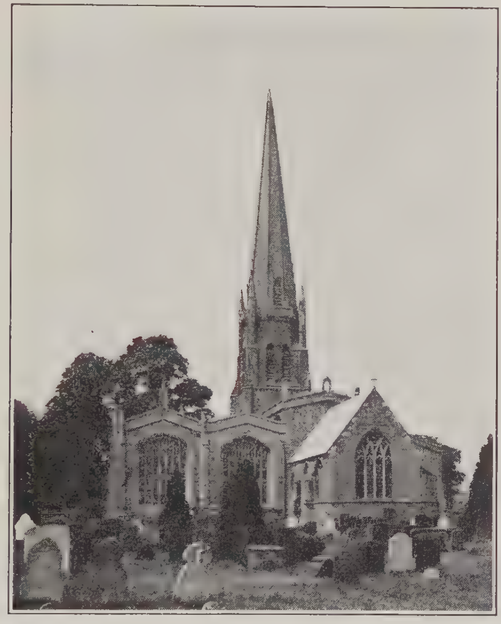
INTERIOR OF LINCOLN
CATHEDRAL

The complication was carried into all the parts. The vaults became a network of ribbed forms, uniting into stars and other patterns of geometry, or spread out into great fan-shaped features of support. The clustered shafts which formed the piers were multiplied as were the hollowed mouldings of the arches which sprang above them. In the earlier work, the narrow pointed windows were grouped in twos and threes, sometimes in fives; in the later, the increasing areas of glass were divided by tracery that tended ever to reduce the size of the individual panes until, at the end, when the glass had more nearly become the wall, it was completely patterned into quite tiny panels by vertical and horizontal lines of stone. Everywhere the structural unity of the religious conception was overlaid by the insistence on detail, by the spirit of the multitude of individuals whose salvation the religion ought to be, by the multitude of symbols that expressed the massed individuality of England. The cathedrals have not the evident unity of the French Gothic; each was not the naked soul of a community bared to its God, but everywhere the detail has a richness and beauty of personal fancy that the French ignored and that was the worship of a congregation strong in the assurance of its personal dignity, which, since God had created it, was worthy to be asserted even in His presence.

On the exteriors there was the same insistence. The conflicting reaction of thrust and counter-thrust was diminished and hidden where it could be. There was a repose, a reserve, it almost seems a timidity, either before the forces of nature acting through the push of arch and buttress, or before the inner questionings which the restless stone forms indicate. The English spirit was never timid in physical things. If it held back here, it was not because it did not dare the battle, but because it shrank from exhibiting the emotion. In these cathedrals the very multiplicity of detail negatives emotion. Where the detail shows it, it is the emotion of the individual within the reserve of his community. It is a poetically personal quality rather than the outburst of a city or a state. The sculpture, although sometimes beautiful, has not the gigantic symbolism that we saw in France. It does not so partake of the structure. It does not gather all heaven around the doorways to greet the worshiper. Indeed, the doorways are often almost insignificant, comparatively secret. The smallness of these openings has been laid to a more rigorous nature, but there is not change enough between the climates of the two countries to explain a difference that is easily in the characters of the people themselves. In France man wanted his God and his Virgin Benefactress to welcome and reassure him. The Englishman desired to penetrate alone, safe in the assurance of his own self-control.

Almost all the English west fronts are individual and full of personal detail. There seems to have been no development of a unified conception of what a church front should be. Most of them fail both structurally and pictorially in their big design, yet almost all of them are full of beauty in their smaller parts. It is the same story everywhere. The expression is consistent because it was fundamental and because it was unconsciously wrought by the Englishmen who were the builders. But if the west fronts fail, the soaring towers are the great glories of the churches. They, certainly, have left the earth, are more dominating than most we saw in France and, while they often flank the fronts in the French way, the greatest of them rise above the crossings of nave and transepts. A number have completed spires and, if we except the spires of Chartres and Coutances, they are the most daringly beautiful spires that exist. There is no timidity here, but there is still the reserve. The distinction is very subtle. Why these English towers hold back a little in the message which they send is almost inexplicable. It may be in the less abrupt roofs below them that do not coöperate as much in the aspiration. It may be in the transition from the square tower to the pointed octagon. In France the tower merged into the upper surfaces. Here in England the pyramids were usually set upon the towers and the transition was masked by buttresses or turrets. There is a break in the upward push, a reserve in the complete subjection of submission. There is all the difference between mediæval France and England, all the difference between the ideal unity of aspiration and the individual community of reserve power.

We cannot delay to analyze the periods of growth, to detail the changes from the Early English, through the greater complication of the tracery that marked the middle or Decorated period, to the thinner and more rectangular characteristics of the so-called Perpendicular. England is rich in great cathedrals, every one of which is worthy of the deepest study; and England is even richer in modest parish churches that show more intimately the growing English spirit. What the houses were to become in the period that was approaching, the smaller churches



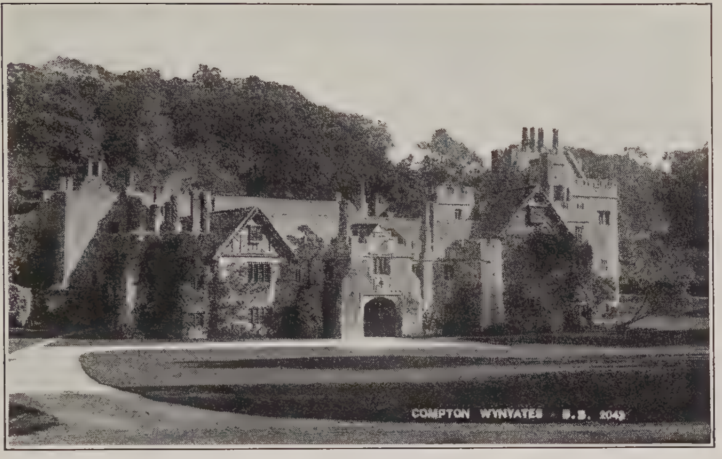
PARISH CHURCH AT BLOXHAM

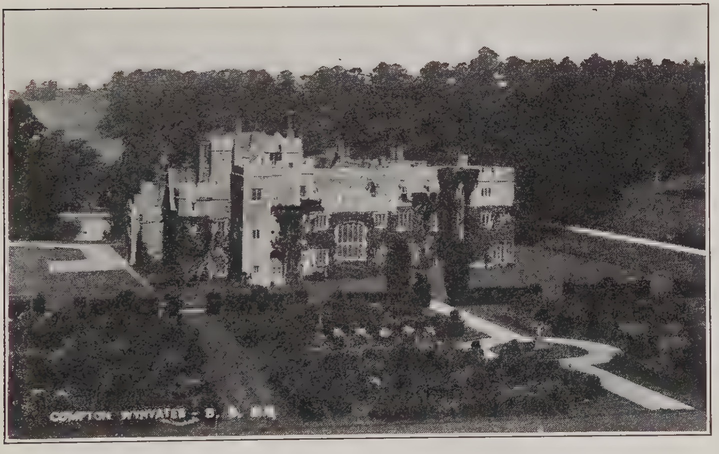
were to the mediæval nation. All the individuality that the cathedrals hint in detail, these have imbibed into their very fabric. They are as varied as they are numerous; they echo all the changes in the style that the cathedrals exemplify. Many of them have thrown aside all symmetry and are as picturesque in their irregularity as they are true to the spirit which created them. They are as human and as variable as man; they have all the reserved repose of great personality and all the intimacy of secret thoughts. They were built by the poets of England, the humbler poets perhaps, who could not write in words, but whose instincts were just as beautiful, whose perceptions just as delicate. Here was no dictation of organized imposition, here was but the sanctuary of the deep religion that was in the people and was more powerful than any potentate because it was the driving force of a mighty nation in the making.

The Gothic lived long in England, but the power of the driving force was changed. England became English and the influence of wealth reduced the force of religion. These, of course, are blatant generalities, but fundamentally that is what happened. The English mass had by now absorbed whatever of foreign blood had come with conquest and which had imposed a ruling class whose descendants had destroyed themselves in civil war. The new nobility was English, the new royal family had distinctly English blood. It may have been that the English qualities were quick to seize upon the opportunities of economic growth; it may have been that the common sense and independence made its own mediæval trend toward self-government seem almost to predict many conditions of the later times. It is certain that the economic change was contemporary with the recrudescence of the basic race and spirit and that many interests of the more commercial society were in tune with those of the Viking forebears. England took up her neglected heritage of the sea and carried her personal freedom more deeply into act and thought. Yet the new power of wealth sought from its own angle to recreate an absolutism that the battle for liberty had already checked, and seems to have fostered only those national qualities that would provide an outlet for the dangerous and exuberant vigor while wealth reaped all the benefits. Home building became greatly significant with the coming of money, of commercial prosperity, but that does not mean that the love of home was a commercial trait. The modern economic development which we know would contradict that possibility. It is a curious fact that the fullest expression of the English spirit should come with the advance of the economic, but it is probable that the new prosperity and the new peace made possible the expression of the old racial feeling that, by chance, had, at the same time, risen to dominance in the mixture of the race. All this is but speculation, but it is suggestive.

Certainly the very general building of houses became a fact and a fact not confined to any class but to all the strata of society to whom the impulse might reach. Nor were these houses in any way a new creation. Their development went back to the beginnings of the nation and the seed was English rather than feudal Norman. The Saxon English dwelling had been essentially a single hall in which the lord and his retainers lived, in which the men slept, and in connection with which there was a bower or women's apartment. The stables and other necessary functions were made part of the same construction. The hearth was in the center of the hall and the smoke found its way out, or should have done so, through an opening in the roof. The Norman Conquest brought little change to the general life of the people, but gradually the uses of feudalism sifted downward through society and organized it more consecutively into units. The English manor became the basis of a local control that has fixed even the present picture of the countryside. It was almost the minimum feudal subdivision, a section of land in which a vassal held sway over a group of serfs or tenants. It was hereditary and the holding of the same area by generations of one family was responsible, in part, for the Englishman's love of his ancestral bit of land which naturally combined into love of England. The manor and the parish sometimes coincided, sometimes a parish included several manors, but the grouping of the manor house and parish church at the head of a village street is one of the most characteristic facts of the English landscape.

The manor houses are the key to all the other houses of England. They are modest enough to show their relations to the farms, sufficiently dignified to be at one with the more elaborate erections of the nobles. The evolution was very gradual and always from the nucleus of the hall. In the type, there was an entrance at one end and an elevated platform or dais at the other for the lord's table. Here, often, were a projecting bay window and other features of comfort. As these possibilities of comfort were understood, as life became more refined, or, as the old fighters would have said, was softened, the demand for privacy added first a withdrawing room, then other chambers, until there were enough to answer nearly the demands of domestic existence as we understand them today. The family rooms spread beyond the dais end of the hall, the kitchens and offices beyond the entrance passage. Convenience was slow to follow physical comfort. Room opened upon room. Communication was not one of the deep concerns of architectural arrangement until quite late, but the instinct for privacy brought this also in the end. During the Gothic period, the larger houses, feeling still the need for possible defense, were stretched around a court and perhaps were further guarded by a moat. In the more peaceful Tudor times, much of the old arrangement was retained, but there was a new expansiveness, a relaxation of vigilance. Often now, the side of the rectangle opposite the hall was omitted, opening the court, letting in more light and air, and chang-





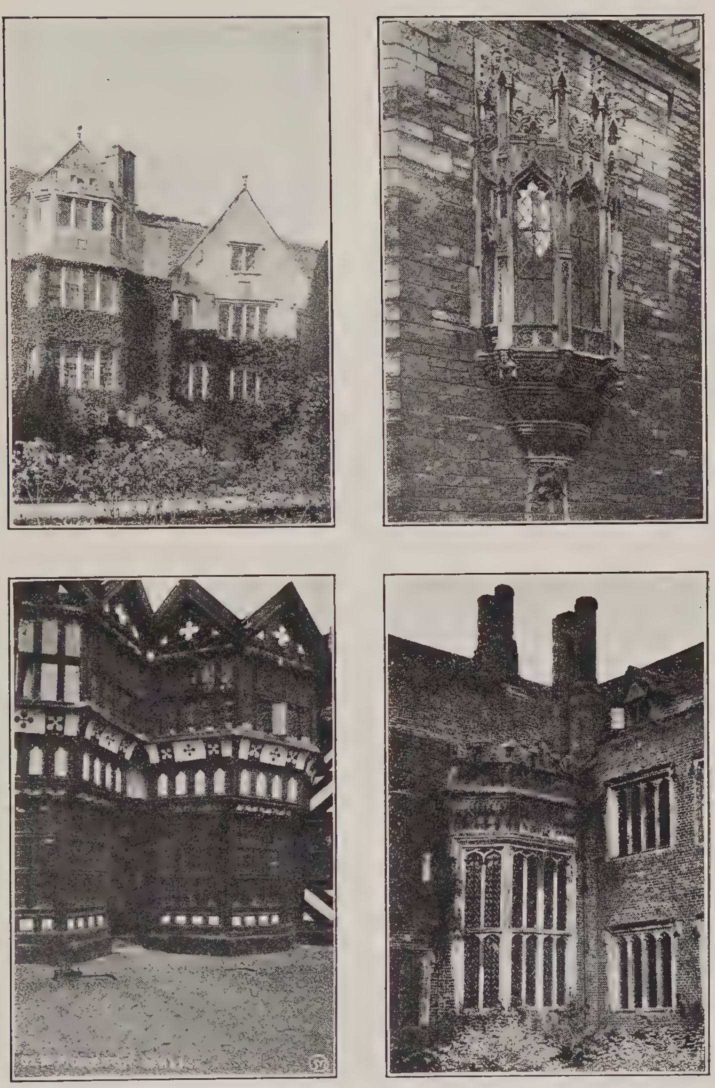
TWO VIEWS OF
COMPTON WYNYATES, WARWICKSHIRE

ing the arrangements into what is docketed by accurate minds as E shaped plans and H shaped plans. There is nothing important in the distinction. In the E plan, the sides of the old court project only in one direction beyond the main building, where is the hall, in the H shaped plan they project in both directions. In all this domestic English work, it has been easy to find distinctions and magnify them into types, not only in these plans which are fundamentally the same, but in the application of detail. We talk of early Tudor, Elizabethan and Jacobean and all that we can mean are stages in the gradual change from Gothic to Renaissance. The English spirit which made the building a home was not in stages. It was the same feeling for home down to the very end, and it is the feeling that has created the very meaning of home.No other race has known it in the same way, or has approached the suggestion of its expression.

The Italian palaces were formal, were forbidding or grandiose as the occasion demanded. The Italian villas in the country retained the formality, even in their gardens and surroundings which were their primary beauty. There is a conscious appeal in the arrangement of trees and fountains and vistas that has all the charm that the most romantic imagination can desire, but to the northern mind the romance is so continuous, so dramatic, so staged almost, that it becomes oppressive for the life of every day. It is the delightful setting for the proper mood, but it does not express home. In France the development was directly from the castle. As life tranquilized, or at least became less predatory—for the Renaissance in France was hardly more tranquil than it was in Italy—the old thick walls were pierced with wider windows and a spaciousness was gained in all the atmosphere of living. It was like the opening into out-of-doors with the promise of spring after a long winter, but a spring that was prone to squalls, as the religious wars attested. The châteaux had all the attributes of royal castles, were still castles even in name and belonged to royalty, to the nobles or to great wealth. They were a magnificent group, but they were not France as the English houses were England. Their most compelling beauty also was during the period that we insist upon as a transition. Transition often is a term for the possibility of greatness and it is not surprising that it should be so when we consider that transition presupposes growth, experiment, delight in discovery and in new combination which fears to stray from structural rectitude before it can be sure the new elements will stand the physical strain which must be the ultimate architectural standard. The exuberance of French detail, half Gothic, half Italian, all excitement, is very winning. The large conceptions are very grand and very royal, but they are always palaces, feudal castles, civilized, relaxed, embellished, overwrought with wealth. One can imagine debauchery within their precincts, but never informality. They are not homes.

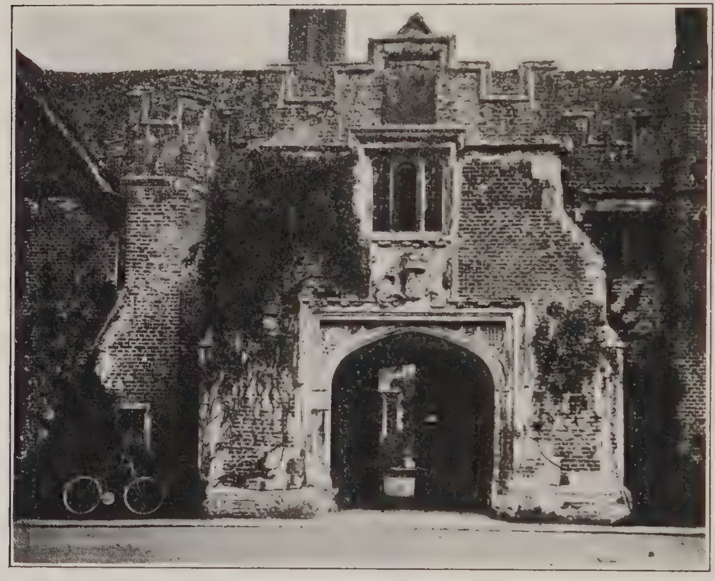
The reason for all this is in the different spirits which created them. The French was conscious art, the English, instinct. The physical explanation is in the scales on which they were designed. The parts of the French are large as compared with man, the parts of the English are relatively small. The most evident comparison is in the windows. The French openings are large rectangles, higher than they are wide, each divided into four by a vertical central mullion and a transom. The arrangement was constant even when the sizes of the windows changed, down to the limits, of course, where subdivision ceased to be desirable at all. The English scheme was a small rectangular opening, often no more than eighteen inches wide and five feet high and, as the chance for light increased, the number of the openings that were grouped into a single window was multiplied. The simple mullions were but an application of the vertical and horizontal Perpendicular tracery and had the possibility of infinite combination for utility and beauty. Windows were set side by side in long low ranges, they were piled above each other into walls of glass, they were bent around the angles or the curves of bays and overhanging oriels. They never lose their touch with the human scale and they are the greatest beauty of the English houses. Sometimes their carving, or a flat arch at their heads, echoes the fashion of the prevailing stage of style. The windows are not in themselves style, for they are fundamental structure of the most obvious necessity, wrought in the most common sense and easy way into the very fabric of the walls. But the spirit back of the common sense was not prosaic. The windows were arranged to fit the need of light and air; they were arranged also to fit it to the atmosphere of home. The small areas of glass produce reserve. It is easy to look out, but there is no expanse through which curiosity outside may investigate the privacy within. There is no symmetry. The irregularity of spacing, meeting just the needs of the individual room, brings the truest balance of picturesqueness, because it is inevitable. The picturesque was not sought out, planned for and forced, designed beforehand. It appeared with the common sense endeavor for comfort. Perhaps that is the best definition of the word that we can find. Picturesqueness is the expression of comfort. In the English windows it is very honest.

It pervades all the other details of the houses. The doorways always are inviting. They reserve the right of entrance, but they have so much of welcome that they whet desire. They gather more embellishment, which sometimes dignifies them when it retains the simplicity of the English manner, sometimes makes them almost pathetically humorous when they ape the fashions of the coming Italian style which they do not understand. Even when the dress is foreign, the framework which it clothes is English and if the importation hangs a little loosely on the unaccustomed body, it but accentuates the real spirit which it cannot hide. As early as the reign of Henry VII, Italian artists were in



ENGLISH WINDOWS

England. More came under Henry VIII and their influence increased. Where their suggestion does not contradict the bigger English thing, the mixture has all the charm of an added beauty; where it tries to supersede the national character, it fails in just so far as it seemed to its creators to succeed.



DOORWAY, COMPTON WYNYATES

Another foreign detail paralleled the Italian, this time an echo which had lost all beauty and retained only distorted facts after its several rebounds. It was also Renaissance, had sometime started from Italian usage, and came to England in books by way of Germany and the Low Countries. It is called strap-work and it is apparently the application to stone carving of design for piercing leather. At its best it is but quaint, at its worst it is vulgar adaptation of some constructive form degraded to a medium that was never structural and then applied to architecture again. These things were slow in vitiating the general taste. We find them only gradually working into the humbler manor houses. It was the new nobles whose wealth permitted the bringing of artists from abroad who reveled in the exotic. It is the greatest mansions that are the least English and least beautiful, but even these have—most of them—the same small scale which keeps them human. They remain houses in spite of themselves, cannot grow into foreign palaces on English soil. We seem to have wandered from the doorways to general and unconnected things. That is not really so. The doorways were the greatest victims of the foreign innovations. In their decoration we can trace the coming danger that was to suppress the forms that had grown under English hands to be expressive of England.

The chimneys are another distinctive feature. They are far more than a mere outlet for smoke that otherwise might smother the inmates of the building, that had indeed hung for centuries among the rafters and choked generations of English ancestors. It was not until almost the end of the Middle Ages that the hearth was removed from the center of the hall and that chimneys were invented. Immediately, they became, without, the expression of the sacred center of the family fire within. The hearthstone has always gathered sentiment; the English chimneys cherished it until the Italian arbiter of taste persuaded that it was too informal. The Italian genius always avoided the picturesque unless it could be made dramatic like the gardens of the villas, for, although picturesqueness may be pictorial, the pictorial is not essentially picturesque. It is the unfortunate growth of the same root word to define almost a contradiction. Yet from the English point of view the chimneys fit both meanings. They form much of the interest of the sky line. In a measure they are the towers of the house, but their message is the simple one of peace and individual contentment. They rise like columns, but since they have none of the responsibility of columns, they are twisted and grouped to suit the fancy, are sometimes almost grotesque in their picturesqueness, but they too are honest, are real expressions of need and use, dignified to show the love of the inward feature that they not only serve but represent.

Windows, doors, chimneys: these are the details of the English home, these simple necessary things are the real architectural formula, if we must have a formula. The foreign excrescences do not hide a single essential thing, might be chiseled away and not affect the structure, only accentuate the spirit. Not until they attacked from a new angle did they begin to restrict the spirit. That we must visualize a little later, but we must try to search out the beauty before we surrender to the limitations that came from outside and with time. The windows, doors and chimneys were the details and much of the beauty. There was little else in the fabric of the house except the walls themselves and indeed the walls, if we look at the matter in the clearest way, are the whole consideration. Windows and doorways are but openings in the wall, chimneys but another bit of wall carried higher to form a draft above the fire. That is very true in the English house. All the work is so consistent, all the material so constructively employed that there is a complete unity of picturesqueness, of balance in projecting wing and gable, of sloping roof and mounting chimney, of openings for light and air and entrance, that it is not only very honest, but very open in its revelation of the life that may be possible within. There is a modest retirement in the houses. In their locations they often shrink from too much publicity. But, once arrived, the reserve begins to break away. There is a distinction here, however. The architecture is absolutely frank and honest. It makes clear the use and distribution of all the parts, but it preserves, not to

MORETON OLD HALL, CHESHIRE

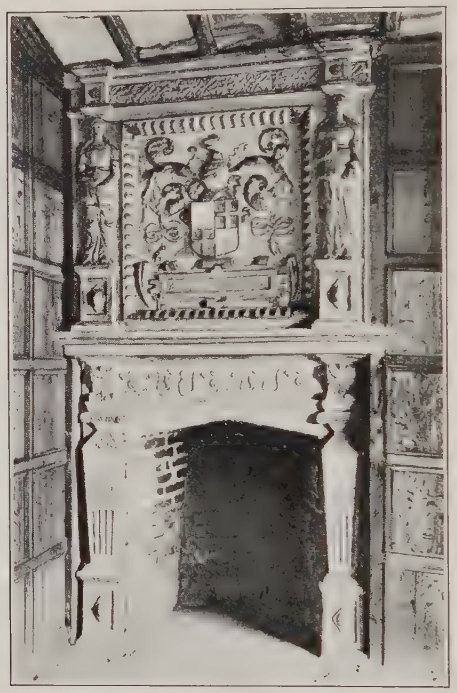
ANNE OF CLEVE'S HOUSE, SOUTHOVER

be violated, the private liberty of the human life of which it is the symbol.

The materials are various, were the offering of the local neighborhoods, were part of the land to which the long lines of the houses seem to cling, from which their spirit seems to grow. There is more than the unity in just the architecture. There is a unity between nurturing earth and man and man's created habitation, that has also come from the same earth. The houses actually belong to the spots in which they stand. Stone and brick and timber and plaster were used alone or in combination and all were used honestly. Always there is a consistency, almost always a beauty of texture, an actual architectural value in the wall-surface, that is more charming than any elaborate decoration. The working of the stone may not be completely finished, but it is personal and better than mechanical perfection. The bricks are handmade and woven into the wall in patterns that make interesting the necessity of bonding together the material. Brick is combined with stone, timber with brick, plaster with timber. The forests were depleted early in the English growth. Wood was too valuable to be employed for entire structures and too inflammable, but what is called half-timbering is common and usually delightful. The frame is of heavy beams, often elaborately carved, the filling is brick or brick and plaster. The timbers that are evident are the actual construction and the ties and braces are hewn out and combined in pleasing forms. Sometimes the brick is inserted in other patterns, sometimes the plaster is painted white and the wood stained black, magpie they call it then. The results are astonishing in their decorative quality, deeply impressive in their honesty of structural expression, intimately charming in their sense of home. There is but little distinction between the rich and poor, between the elegant and the modest; no distinction in spirit and in honest beauty. When the great outburst of house building became possible, it was Englishmen who built, Englishmen it is true who were shifting into new levels of society, but men who had been nurtured in the same traditions. The levels of wealth were new, the spirit of home-love which seems to have been as old as the beginning of the nation, was still at its highest pitch.

These houses were by no means pictures such as the Italians loved to build. It is almost impossible to consider the externals without realizing the interiors. The porches over the doorways, the irregular balance of wing and gable and dormer, of window and chimney and roof, were not designed for the effect that they themselves might give, but because they filled the necessary needs. They are merely the outside of the inside, as one might say, and that in architecture is unfortunately not the obvious generality that it would seem to be. Here, the windows are the key and give the scale within, just as they do without. Their very human size dominates the entire scheme and they are equally important, equally beautiful from both points of view. They are not abrupt holes, cut through the wall at arbitrary places to conform to some design; they remain with their mullions and transoms, essentially wall, continuing its structural function, but moulded between its working members to admit the glass. The scale they set is carried over into the wooden sheathing and even reduced by the small size of the oak panels which line the walls. The rooms make the utmost appeal to the sense of home. They are environment and do not dominate the human personality, but they have been put together with such loving care that they reflect and accent the personal.

Fancy has had its part in their embellishment. The fireplaces are often elaborately carved and very charming. They are the frames for the fire-symbol of the family hearth, were evidently understood as such and, in their truest expression, show just that purpose. But they shared with the doorways the danger from the foreign detail. As the presumption increased that the much-vaunted work of Italy was the true beauty and as this came to be appliquéd over the English surfaces, it was spread at first around the entrances and around the fire-openings, almost as an offering of what was rarest, because it was newest and sought after, to decorate the symbol of welcome and the symbol of warmth. While it was real transition it often brought increase of beauty. All growth is but transition, whether it be within itself as with the Gothic, or to something different, as here from the Gothic to the Renaissance.



FIREPLACE, MORETON OLD HALL

The ceilings felt the same influence. Often they were covered with panels and reliefs, interwoven into a network of design that was modeled in the plaster. The plasticity of the material was understood and made the most of. The decorative result was restricted only by the artistry of the workman and yet some of the most naïve ceilings are the most delightful, because they show the endeavor of sincerity rather than the finish of some imported mediocre master. The modeled ceilings came rather late in the development. They gradually replaced the exposed beams and rafters of the Gothic habit, which they surpassed in lightness and reflective quality, but never in dignity. The old beamed ceilings of England are masterpieces of evident construction, wrought into an architectural feature of real worthiness. They were a growth in themselves and capable of any demand of size or modesty that might be put upon them.

It would be easy to suggest in almost endless detail the charm and the variety of these interiors. All their parts were the environment of life, of the most intimate life of a people with the instinct to create a home. They were thought out to make the facts of life easy and comfortable and their purposes dignified them into beauty. The stairways grew from being simple twistings of stone steps around a central newel, into broad ascents whose carved posts and balusters are still the glory of many an old mansion. The difficulty of communication between the rooms in the upper stories was obviated by long galleries whose windows opened into deep bays and whose paneling was hung with family portraits. The hall remained the center. Hall and stair and gallery became the distinctive features of the larger houses, but the intimacy of life retired to the more secluded chambers that were specialized for the uses of existence.

We have laid our emphasis on the houses in the country, on the houses that stood isolated among the gardens which were as beautifully homelike as the architecture, on the great mansions, surrounded by vast parks, on the more modest manors, on the farms and on the simple homes among the villages. In the cities there were different needs and therefore changed results, but the same idea. As concentration increased the houses drew together, their arrangements were compressed, their external expression restricted to the free-standing front and back, but the expression, so far as it could go, was English and they remained homes.

The English builders instinctively expressed life; the Italian when they looked back to Rome turned to a conscious art and drew away from life. That was the deepest danger of the Renaissance imposition to England. As long as the influence remained external, a fashion of decoration to be employed by those who had the means, there was little danger to fundamental things, but the Renaissance was a missionary impulse. There was something in its newness that demanded recognition from the wealth that was also new. It was modern, up to date, progressive. Also it was very old, was said to be the real foundation, —"all digressions had been but barbarian makeshifts, untutored attempts." Wealth, as always, demanded ostentation; could argue itself into the Renaissance viewpoint, was indeed one of the factors that had brought the Renaissance. Wealth, as it became organized, was not homelike because its ostentation was not a quality of home, and so the English tradition was endangered. The movement was not English, did not concern the people until it trickled down to them from the upper caste of wealth that was becoming un-English, cosmopolitan.

The individuality of England had not been that of the artist; it had been, rather, the individuality of the mass reduced to its personal but nameless elements of action. The first signal of disaster was in a name, in an architect, as we use the word, trained in Italy to design after the Italian manner. Inigo Jones began his work in England in the reign of James I, early in the seventeenth century. It was revolution because the basic viewpoint was Italian instead of English and was pictorial. It was no longer Italian detail fitted to English houses, but Italian design warping English usage into the new idea, a combination in which the English must give way where it contradicted the sacred formulas of the Roman copy. We will not stop over the vicissitudes of the classic work in England, or the parallel English growth in the American colonies. Even yet the old spirit persisted in the humbler buildings, persisted when every detail that we have described had given way before the inroads of the Renaissance. Windows, doors, mouldings, were in the classic style. The orders made their usual demands and usurped the decorative privilege of real structure. And still whenever they could escape the influence of one of the formalized masters, the English and American houses insisted on their old small

GROOMBRIDGE PLACE, KENT

scale, on their intimacy, on their fundamental usefulness, on their expression of reserve and privacy. In spite of the new formality, of the fetish that was made of symmetry, a quality of picturesqueness still hung about them, that almost contradicted the fact of change. The most astonishing truth that can be argued from the development of the later English Renaissance is that even the most restrictive formula cannot control and cannot hide a vital spirit that has its inception in national life.

Outward forms were hardly more than garments that might be changed as the fashion changed. England experienced all the great types that Europe had invented and the informing spirit remained English. Her strength was in her instinct for the things the architecture must represent, for the uses to which it must be put. Form was not her great concern, was never, in a fundamental way, her own creation. Where the spirit was greatest the form was least, could not be separated from the structure and was often the barest structure, with no warping toward decoration other than the loving care with which the materials were worked into the fabric of the walls. It was an architecture of the people and for the people. There is a great lesson in it for the future, the old lesson of honesty.

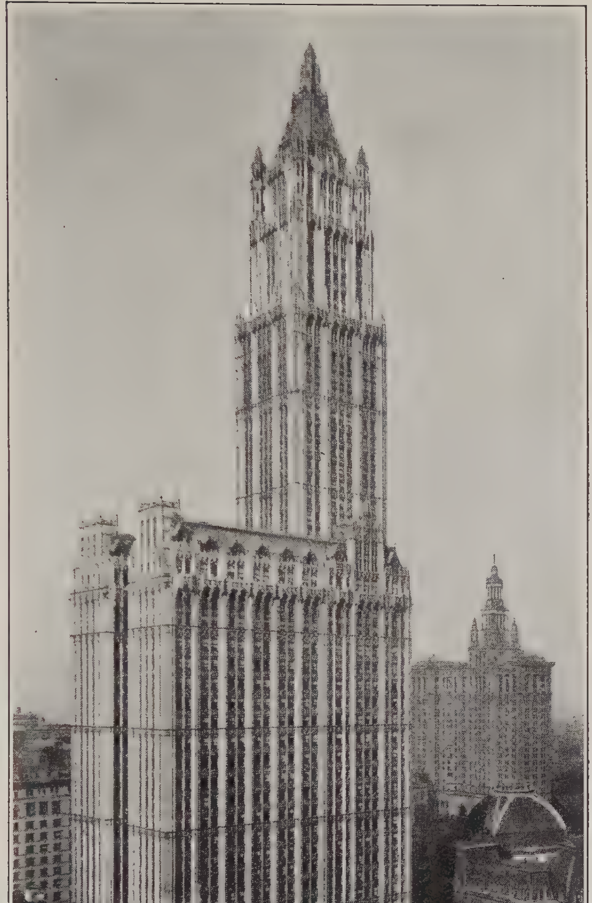
In the stories of King Arthur's knights there was always a hero who symbolized the ideal. The personality changed as the generations retold the tales. The hero, through the minds of the mundane chroniclers, lost his purity. Lancelot succeeded Gawain, Galahad followed Lancelot. Familiarity tarnished the glamor of knighthood and passed it onward fouled by the contempt of familiarity. There is a truth in that even for architecture. The familiar becomes common, the new and untried is sought for and acclaimed. Styles pass as the heroes passed. But there was an ideal behind the hero and when one failed another had to come to carry the ideal further. The parallel does not always follow. Style does not always embody an architectural ideal, becomes too often no more worthy than the knight's trappings that may hide degradation behind the glitter. That was not so for England. Here the one spirit did persist though the trappings changed; here the ideal that grew from the inner feelings of the nation was more than the trappings, than any style. It spoke through architecture what it also spoke through poetry, what it had proved in action. Architecture was but one means to its expression, but in return, its gift to architecture must remain the conviction that usefulness, fitness, the dignity of honesty are above all formulas that the most gifted artistry can devise.

CHAPTER XIV

POSSIBILITIES

IT is not possible for us to judge ourselves as future generations will look back upon us and judge us. It probably never has been and never will be possible for any age to estimate correctly its own place in the big development of civilization. There are, however, certain trends today which stand out clearly. They were rooted in the complication of the past. Some historians would have us believe that all history has been, and must be, a series of cycles, or at most a great spiral always returning on itself to similar if not identical conditions. They liken our commercialism to the centralization of the Roman empire and there is much in superficial fact to bear out the comparison. But the generalization is very sweeping. From another angle, history seems rather a steady stream where some strong impulse does creative work, cuts its way deeply, and then with lessening force spreads out, drops its sediment and dams itself until another flood sweeps the whole mass forward for good or ill. Greece accomplished an enormous work and the conquests of the Macedonians diluted it to cover almost all the nearer eastern nations. Rome added a certain force, stirred the Greek sediment and spread it further, where it stagnated under her concentrating power until only the growing Christianity trickled toward the future. The barbarians flooded into the great pool of Roman civilization and set it seething and rising until the whole disjointed wreckage, reaching at last to its old creative level, broke bounds again and plunged ahead toward some ideal that we, as yet, have not defined.

If we are similar to Rome, perhaps it is because we have



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WOOLWORTH BUILDING, NEW YORK

not yet moved far enough from Rome to break the contact. The economic system began to reconstruct itself as soon as any order shaped through the barbarian vortex and the development of Christianity hardly slackened during the worst confusion. The barbarians were young in civilization and youth has always been adventurous, destructive, experimental, credulous, imaginative, what we call progressive. Maturity and age are settled, commercial, conservative. We are but the maturity of the barbarians. We have retained the religion shorn of most of its imaginative quality and we have reperfected the economic system, but we have gone further. Taking up a suggestion of the Greeks that Rome almost ignored, we have created science, not alone the science that provides the mechanical convenience of our lives, but a deeper thing, a far searching for facts, for truth, that may uproot all the preconceptions about life. The imagination, transmuted into curiosity, has been distilled into the very essence of imagination again, that disproves the contradiction between itself and fact and is most potent in its power to deal with facts. It is the imagination of individuals as seems necessary in the complication of civilization, but of individuals who are not expressing life or making symbols, who rather are creating the power of the future for the masses. If there is a compelling force today that seems directed toward ideal definition for the future, it is this imagination of science, and the fundamental assumption, as it progresses step by step, is truth.

Now narrow our discussion to architecture. Again it is impossible to judge as the future will judge, but it is possible, more than that it is a duty for us who have a mass of accurate knowledge such as no other period has possessed, to use all that we have in forming a standard of criticism for ourselves, a standard not alone for judgment, but for creation. How fundamental such a canon may be is problematic. Whether the future will accept it is no concern of ours. Its value will depend upon the sincerity and intelligence of our inspiration and we can trust the future to estimate us more truly than we can estimate ourselves, just as there seems no doubt that we appreciate, through the long perspective, the changing enthusiasms of the past in a clearer way than the past judged its own present. Certainly, the standard has changed from age to age, the enthusiasm has been for different things, but throughout, with the possible exception of Rome, the architecture of the past was founded on real enthusiasm which implies at least an understanding and appreciation among a large percentage of the mass of people. We have lost the enthusiasm. We must admit this except for a group of men specially trained for the profession, but we have, what no other age has had, a general knowledge that permits analysis of the enthusiasms of all the periods. We have also the scientific point of view toward facts; toward facts not as we might wish to see them, but as they really are, toward truth, in other words. The combination of knowledge about facts and the demand for truth in facts places us in a position to argue out the standard we desire, to correlate the past with itself and with the present. Our very lack of enthusiasm will make this easier so far as it is a standard of judgment, but it is a great obstacle to creation, for, without enthusiasm, even a general appreciation of the standard will bring architectural creation, which concerns art, almost to the level of a purely intellectual problem, which is science shorn of its imagination.

For the moment accept the point of view of imaginative science, of truth in facts, for our standard. The basic fact of architecture is structure. Without structure the art could not exist. It is to architecture what marble and bronze are to sculpture, what pigment and canvas are to painting, what words are to poetry, what sound is to music. It is the means by which the art makes its sensuous appeal, but there is a difference. Marble and pigment and words and sound, so far as they relate to the arts they serve, exist only for the artistic expression. Where and while they are so used they are absorbed by the expression and have no other duty. But structure cannot be absorbed. It is necessary beyond all artistic manipulation to shelter the physical facts of life. It would be just as necessary for all practical uses were it not a question of art at all. Every art has a physical basis or it could not reach us through our senses, but in architecture this basis is so vitally existent in itself that the very nature of architecture is a duality in which the structure is the indispensable factor.

So much for the fact. Now the first question. What shall be the relation in expression between structure and art? The structure is unavoidable. Shall we admit it or hide it? Architecture is two-sided. Shall it be a contradiction or wrought into a unity? Structure implies material. Shall this be made by art to remain true to the demands of structure or shall it be warped by some artistic preconceptions into forms that disregard all use? This is a fundamental question and the first argument is on the grounds of possibility. Carry the disregard of structure to its logical extreme and it becomes disregard of the laws of gravity. The structure would collapse. Certainly, then, there must be some consideration for structure if an architectural conception is to exist.

Look now to the past. We need not recapitulate in detail. Egypt's greatest care was for results in living, but she never for a moment attempted to hide a single fact of structure. She made the admission of her system of building one of the great helps to her expression. Greece wrought such a balance that all duality disappeared. The structure was art, the art was structure. Rome borrowed what art she had and with it covered the framework of which she seemed ashamed. Her architecture was an endless contradiction. Those who followed her in the Gothic period threw aside her false art and created another while they developed their structure from Rome's suggestion, and the art they created was out of the structure, always glorified it, could not contradict it. The Renaissance turned face about. It went back to Rome for art and neglected structure so far as possible in its expression. It built pictures. England absorbed both Gothic and Renaissance, at her best ignored all conscious art and her expression was as unified as was the Greek. Here are the six greatest enthusiasms of our west summarized. Four of them voted for the recognition of structure as the basis of the architectural expression, two against it, and these two can hardly be considered separately, as the Renaissance became the cultural heir of Rome. We are not quite ready to discuss the artistic side as such, but it is fair for our analysis to admit the evidence that the great majority of travelers and students who are familiar with the different styles will agree that the Roman and Renaissance buildings, those of them that are typical in their pictorial manner, are less impressive as a group, less able to call up spontaneous admiration than the typical constructions of the other styles. We are safe in drawing the conclusion from the past that the recognition of the structural requirements is fundamental in the greatest architecture.

We may strengthen our conclusion with a question almost of expediency. Will the growing temper of science which demands truth tolerate anything that ignores facts? If architecture is to hold an honored place must it not conform to the scientific point of view so far as the demand of structural fact has any just claim upon it? Should architecture or any other art overstep what science finds to be truth, the further development of that art is in the balance. That leads us to the second point, to an understanding, if possible, of what art is, in itself and in its relation to architecture, but however far we may go in our big definition, we must not forget the architectural limitation we have already imposed, we must not forget that art may have free rein only so far as it makes good the expression of the structure, not passively, not merely keeping within the bounds of stability, but actively, creatively, fundamentally, working as the Greeks and the French worked to make the structure art.

What is art? There will be as many answers as there are men to answer. The dictionary tells us that it is "the combination or modification of things to adapt them to a given end," and again, "a system of rules and traditional methods for facilitating the performance of certain actions," and still further, "the science and theory of beauty in perception and expression." The thing is too intangible and too big to be grasped by a dictionary. The last definition is certainly nearer than the other two, but this is too precise. Art, some say, is the expression of the feeling for beauty. Even beauty, in its ordinary sense, is too limiting a word. If we wish to be all-inclusive, perhaps we can go no further than to say that art is expression. It may be the expression of something physical, of something intellectual, of something emotional; it is always expression which has passed through the human focus. Beauty has been absorbed into it because it is the things that appeal to us as beautiful that most often demand our expression, that we desire, if not to share, at least to register so that others may realize our appreciation. The expression then must be intelligible, it must make use of the human means of communication, it can speak only through the senses and by methods that have a common value. Art then must be sensual and must be symbolic in the broadest use of the word. It becomes the symbolism of physical fact, the symbolism of intellectual perception, the symbolism of emotion. It is fundamentally individual and personal, because the perception and the expression, in the last analysis, must be individual. From this comes its intangibility and its variety, for it is as flexible as the compound mind of all the world, which is a mosaic of individualities. But related groups of men think and feel in much the same way, hence art groups its expression and becomes racial and national and doubly significant by the force of numbers, because it has more inclusive things to express, things more generally understood and appreciated. In its essence, art is altogether naïve, untutored. Only through long series of expressions, through its need to be intelligible, through its dependence on the senses, has it gathered traditions, laws, conventions that permit it to speak through their limitations, unless these things themselves become mistaken for art and doubly limit it. Convention, formulas, certainly are not art. They were developed as a vocabulary, as a means of speech, and when they supplant the vividness of the thing to be expressed, art has ceased. Whatever art may be or may not be in all its manifold variety, it is a quickening of appreciation; it is a fact, or thought, or feeling that is so significant to an individual or to a mass of individuals that it must be registered. It is a power, not a manner. Mere form without conviction is never art.

In general parlance we limit its expression to what we call the fine arts—to sculpture, painting, music, poetry and architecture. This is not because the feeling that overflows in art could not become articulate in other ways, but because these have become the traditional methods of bridging the gaps between the senses of individuals. Each fine art is greatly significant in its own sphere, in its own material. Each has the power to realize some facet of the art-impulse more completely than the others. Sculpture is most physical, can idealize form in all its delicacy and complete roundness. Painting balances the physical and the emotional, poetry, the emotional with the intellectual. Music is most nearly pure emotion. Sculpture has actual existence, has three dimensions. At its best, it does not depict emotion, whose reactions are too fleeting to remain true in the imperishable material, but by the realized beauty of its forms, it can recreate in the observer the impulse of the artist. Painting is more limited in its form, less so in its power to reproduce emotion. It has but two dimensions and may suggest the third by the convention of perspective, but it has color, atmosphere, the means to suggest the momentary surroundings of emotion. It is less complete and more flexible. It can recreate the situation which produced the impulse in the artist and it can speak in a limited way the language which sculpture speaks, by its relations of form and mass and light and shade. There is more to its expression than the telling of a dramatic moment, more than in any actual thing which it depicts, for the manner of painting should be expression. Poetry is almost painting with words. That does not imply the descriptive quality which of course is present, but a deeper parallelism. Words are as potent to recall emotion as the action or facial expression which delineates it; words have the same magic to vivify the dramatic moment. They have not the pictorial quality of space and color, but they replace this by their control of the sense of time and go beyond it in their exposition of pure thought and feeling. They make no visual appeal, but their beats and rhythms react on the reader or listener much as in painting the spaces and rhythms of color and tone react on the observer. Music ceases almost entirely to be representative. Form it cannot deal with, although by reproducing familiar sound combinations it can to some extent invent a picture, but this is not the true function of music, nor is thought, which is the reaction of the intellect. Music is the echo of emotion which can recreate emotion. It makes less demand on the reason and has, perhaps, a deeper power to move souls. It is allied to poetry, more vaguely to painting and to sculpture, by its rhythms, by the arrangement of its beats. That there is a certain underlying relationship between all the different methods of art is evident even from a superficial analysis. Science will make the union closer by explanations of light waves and sound waves, physical truths which react on the eyes and ears and which, ordered by the impulse for expression, make possible its understanding.

Architecture is one of the fine arts and yet it must stand in a certain way alone. There is always the fundamental fact of structure which is not art. Painting and sculpture and music and poetry exist because there was some impulse that needed expression. Architecture exists because man needed protection from the elements and gradually evolved the demand for privacy and for security from man. The thing was there before the possibility became evident that it was a means for expression. It is conceivable that stability of structure brought a certain order before the sense of art demanded the order which is the basis of all artistic expression. Whatever the development, architecture has become a vehicle for art, although it in itself is not essentially art. It cannot reproduce the beauty of physical form as does sculpture, it cannot create atmosphere and light and action as does painting, it cannot deal with thoughts as does poetry, or be pure emotion which is music. But it can make use of that order, that rhythm, that harmony of size or space or shape which is the underlying principle of all the arts. Architecture has a definite thing to do. It can do it most worthily in the manner of art, but it cannot be unrestricted impulse as can the other arts. They are limited only by the sensual demands of understanding. Beyond that each is free to show forth any impulse from fact or thought or feeling. The primary impulse of architecture is structure. That is the cardinal demand of our standard. The manner of art is the second.

We can make this perhaps a little clearer. The revelation of structure must be fundamental, but this must be as ordered, as nearly beautiful, as much art as possible, and this should be true of the essence of the structure, not alone its covering or its details. Of two possibilities, then, the structural form which has the greater power of order, of beauty, is the more worthy. If we make structure fundamental, we do not delegate to it all the rights. It must not follow the line of its own least resistance. That would be as disastrous to beauty as unrestricted artistic impulse might be to stability. To weld the two together into an architectural unity, both must give way in things that are not fundamental, and in the compromise both will gain. There is no real contradiction. Certainly the Greeks found none. Their architectural forms were almost as purely beautiful as was their inimitable sculpture, and every one was structure. The same thing was true of the best Gothic. Every form again was structure, and here was more than structure for the forms became almost as emotional as music. There is a distinction here and an illuminating fact. When the construction was altogether honest, when it had been made as beautiful as the thing itself could be, always in the past, something had been wrought that went beyond the domain of the artistic impulse working on structure. A great expression of life stood forth, almost unexpectedly, from the successful solution of an architectural unity.

Two points have been gained then for our standard. Structure must be admitted and emphasized, but it must be controlled by art, so far as art does not infringe upon essentials. This accomplished, there results the possibility of the deeper expression that is fundamental art. Such a possibility we must examine further in its application to ourselves. We are told that there is no reason to believe that any nation, by which we mean, of course, a certain racial homogeneity, will ever go down to destruction, will forego all power of creation, from mere internal degradation without some external impulse. History gives us no example. The outside influence always has been present at the death of nations. Egypt is the only national entity, in any way connected with the past we have been studying, that might be even suggestive in this respect. Her life was incalculably long, her vicissitudes were various, her culture had an astonishing power of recrudescence. Periods of strength followed what, as we look back, seem to have been almost complete exhaustions. Conditions changed, expressions changed, and yet the assertion of character was remarkably the same. In the end, it was the invasions of Assyrians and Persians and Greeks and Romans that wiped Egypt's nationality from the earth, and her character persisted long in spite of foreign rule. So far, all the evidence upholds the assertion. On the other hand, each period of renewed activity seems to have been a little less virile, was certainly less really creative than the one it followed. Egypt seems to have been running down. What the end would have been without the foreign shock it is useless to conjecture. The invasions did intervene and Egypt ceased to exist. The same was true of Greece and Rome. Rome destroyed Greek independence and the barbarians submerged the Roman empire. As we have said, we are but the maturity of the barbarians, and our problem is entirely in their development.

We must return again to the theory of youth and age. The barbarians when they swept upon the scene, were very young in civilization. They were simple people in spite of their hardiness and the nature which surrounded them seemed a group almost of personalities that might be hostile. They saw the facts only through the wonder and fear of their imaginations. This supernatural nature could be controlled for men, only by the interventions of men who claimed a supernatural power, of priests and miracle workers. Religion easily dominated because it was the only refuge from the ever-present fear of unseen things. This first barbarian age, the Middle Age, was the period in which the barbarian imagination ran riot. Men acted from their perceptions and their perceptions were as their fancies created them. Every spring of action was, in a certain sense, a symbolism and, in a broad way, all of life, being symbolism, was art, so that the art expression was deeply significant of life, was a fundamental part of existence. Gradually the conditions changed. Facts, continually met and faced, lost their supernatural semblance. Commercial revival followed and a money standard replaced the miracle, but the habit of symbolical expression persisted naturally and unconsciously. There were no fixed stages. The balance slowly shifted from the imaginative impulse to the economic and when the economic men shook themselves intellectually and gazed about them with a new freedom from all fear, facts interested them and curiosity delved after any fact, after all facts, after natural truth. So the scientific spirit was born from the economic and, if it is not too futile to look ahead, bids fair to supersede it. The artistic impulse suffered. The mind of trade in the mass was closed to impressions that demanded expression in beauty, but the symbolic expression had become a habit and might still be useful in showing the richness of commerce. Art continued, but it came from the hands of specialists as a self-conscious effort founded on convention, not on fundamental impulse, and was created for a price. This was true in general, no matter how genuine was the inspiration of the individual. The racial groups had ceased to think in art, but they employed it for the satisfaction of their importance. The viewpoint of fact invaded art and self-consciousness restricted its expression. Barbarian Europe had been through a period when its imagination, controlling action, spoke naturally through art, was indeed art; then Europe dropped to another age whose excitement and curiosity still lived naturally in the light of art, and finally Europe passed on to a present where the concentrated pomp of money has made self-conscious use of art for its own ends. The youth of the barbarians was a great symbolism, expressing itself through the restrictions of art, but the expanding intellect, turning to fact, had less need of symbolism and more and more has disregarded art. It is useless not to face the situation. We live in an age where art has no common vital hold on the generality of the people.

How much this means in the life of the civilization of the barbarian nations we cannot tell. Possibly we are but at a time of imaginative inertia, preparing for a rebound; possibly the change is fundamental and final and the impulse that demands its expression in art is passing from us. So far as the old art is concerned, there are good grounds to fear the latter. The dead imagination of the classic nations was revivified by the young blood of the barbarians and, as their youth has yielded to maturity, the imagination that spoke unconsciously through art has disappeared. The change to the economic type seems to be a permanent change. The mental balance has gradually become different and a return to the expression that was natural in the Middle Age would demand a reversal of conditions such as, in the past, has come only with the influx of new blood. And for us there are no barbarians to renew the cycle. Every mass of population in the world that might upset the balance has begun, at least, to feel the reactions of every other mass; no one could become predominant without gathering the knowledge of the most advanced. Whatever change may come, must come from the forces that are now at work. There is no outside power of the imagination, strong in its youth, waiting to destroy the present system. If it is true that civilizations do not die unless they are killed, there is hope that what seems progress really is advance.

The annihilation of any one modern nation by any other need not threaten this, for civilization has ceased to be a national affair. It may even plunge into the depths only to find itself more firmly than before. We can but reiterate the fact that at the moment art has ceased to be a vital, natural thing. It has become self-conscious, formalized, and as it is, we must accept it. This then is a limitation that we must admit for our architectural standard. Structure must be ordered by art, but the only art that is at our service is one of law, of tradition, of fixed limitations beyond the old restrictions of materials, for the broad creative impulse is, to say the least, asleep.

The old national, spontaneous art may never come again, but, even so, the experience of the past may give us hope. The promised progress may prove reality. The unconscious symbolism of young civilization was lost in commercialism and the thoroughly economic mind has encouraged but not progressed in intellectual things. It has had, however, the strength to face facts, and from bravery before fact has come the scientific spirit. Commerce has used science, has made its growth possible, but science, in its increased freedom, makes no promises to commerce, may repudiate it as it seems to have repudiated art, as many say it has contradicted religion. Yet real science only searches truth. Where truth may not be made evident, science reserves judgment, but it does not contradict. It will never contradict what is real truth. It is not for us to venture into the vexed discussion of commercial and religious matters; it may even be useless to speculate on the future point of view toward art. The present is really our concern. But the contradiction between art and science is stated as existing in the present. Yet there is nothing in our definition of art to conflict with truth. When we say that art is expression, even when we add the beauty, we might be speaking in the terms of science, for there can be no more beautiful expression than that of truth. All the past was seeking for just this and its untutored imagination could speak only through symbols. If the unfettered imagination of science can reach to truth without symbols, cannot art then express truth more greatly than it has ever done? Science, we hear, contradicts art, but is not this the debased art of commercialism that is entangled in ostentation and formula which science has rightly found to be hollow and untrue? When imagination becomes the truth seeker, with all the power of scientific knowledge and research behind it, art may transcend all symbolism, may throw off all limits beyond the demands of sensual communication and so, creating new and undreamed-of forms, become the expression of science. If art is a fundamental necessary human thing and not a mere point of view, then it itself is truth and is as deathless as civilization, more deathless than the culture of any given period.

Science may be repudiating the art it finds around us, may be repudiating the art of architecture as it has recently existed, but it is not repudiating art or architecture. Already science has made structure its own and structure is the first great fundamental of architecture. The situation is illuminating and indicates another side of our present problem. In the Middle Ages architecture was a national concern. It was growing, expressive, because a great many minds were thinking about it and so combining their ability. Each mind may have been considering its own small part or personal interest, but in the Gothic every part, every stone almost, was just as much unity or contradiction as was the entire scheme. No man or group of men was employed solely on structure and no other was engaged on decoration, on art. The things were inseparable and the working and placing of each stone added to both. Conditions have changed that. The predominating influence of personality on design has twisted the idea of design into what is often a false and superficial thing, altogether independent of structure. The individual superseded the mass, relegated the constructive side, which did not interest him, to underlings, until science, realizing the demands of commerce for stable and economical structure, took the matter into its own hands and has supplanted the architect in that fundamental side of his profession which, in the past ages, was always the key to progress.

The individual has become two individuals. Architect and engineer both seem necessary for a great modern building. Often there is a triumvirate and the business man, the representative of commerce, is added. All the types of mind are present, the imaginative, the economic, the scientific. Sometimes there are actually three men at work on a big conception, usually there are two, at least, almost never, under the present complications, will the knowledge of one alone seem to suffice for everything. The business man must be on hand to secure the job and to see to it that the money spent brings in the utmost return. Commerce, when it pays for art, wants all the art that is possible and wants it to show, whether it be fundamental or not. Science must be ready to make the design stand up against the law of gravity. Art must produce the design to please the taste of commerce and to meet the demands of science. There has grown to be a separation which seems inevitable, but which is not necessary. It is almost impossible to discuss the situation without seeming to attack. The condition is the fault of no man, and many who are working today realize its disadvantage and strive against it. The Renaissance has left us a legacy of formulas which long usage has fixed among the canons of architecture. With the Renaissance came the end of national thinking, but the fact that the inspiration is now individual need not make it superficial. The art impulse may be just as sincere whether it be in one man or many.

The dominance of the individual on design does not predicate unworthiness in design, although it may militate against general acceptance and sympathy. The fact that the scientifically ordered structure of today is complicated and exact does not prevent its being understood and used by the artistic mind. The demand of commerce that the art it buys shall show, need not cheapen the quality of art, so long as art insists on truth in the sphere to which it is restricted. There is nothing in all the complications that one balanced mind could not conceive and guide, nothing that such guidance could not order into the possibilities of greatness.

The difficulty seems to be in the point of view that art has garnered from the nearer past. As inspiration waned, the formulas have been exaggerated into essentials. Natural combinations of the past, of several pasts, have been made fixed laws for the present. The fact that there are several formulas shows the absurdity of holding any one inviolate, the impossibility that any one is the final word. The use of any is but the refuge of creative poverty, of a self-consciousness that has grown upon us with the centuries. If there were something vital to be said, the self-consciousness would disappear. We are in an age of mixture, an age that still remembers its barbarian youth and yet can hardly understand it, an age that is firm in its conviction of material standards and yet in which all standards are spreading from national things to embrace the world. Civilization is becoming a universal thing and the turmoil of the growing unity prevents a true expression, because the final standards of the unity are in the balance. Art reacts upon the past because the future is chaos. Science projects itself into the future because science searches truth and does not fear facts which may bring the chaos into order. Meanwhile, commerce keeps the only balance, perhaps, that could be kept, for commerce is the practical means by which the unity of civilization is advancing. Architecture is torn between the three influences. Where science has grasped it, there is growth; where the art formulas persist, there is stability; and where they bow to the dictates of commerce, there is a certain degradation. When we began to discuss the possibility of an architectural standard for our present, we admitted, momentarily, the point of view of science. Perhaps that will be the final basis, both for judgment and creation. Already science has produced remarkable growth in structural ways. May it not also insure growth in art? May not the expression of truth in the new structure be the only impulse that architecture needs for a great new expression? We must begin self-consciously, for there is no spontaneous impulse, no general enthusiasm, but if we always analyze down to facts, show them forth and try to make them beautiful, will we not, in the end, discover that deeper expression which the past found so immensely when it sought truth?

This will mean the death of formulas. No past arrangements of forms, even the most beautiful and the most expressive of their own requirements, are fitted to express the modern structure. No creative age in the past built its creation on copy. Trace for a moment the historic growth. Rome took the forms that Greece invented for the simple construction that was both Greek and Egyptian. Even the Roman reproductions were not copy in detail and Rome added the arch, the vault, the dome, and gave the impulse for new structural systems. The Romanesque worked on these possibilities, using all the past had taught, adding features from the Byzantine and even from the Arabic, but constantly changed the forms to meet the new truths of construction. The Gothic was fundamentally a creation, but one that welded all the accumulated experience of ages to express a vital conception. The opening of the Renaissance was a continued growth. A new perception of the old was mingled with the development from the old and, although the perception became less vital, the transitional mixture of truthful form had enormous possibility. The Renaissance, however, could not continue. The conflict of conditions blinded men to the essential thing and the tyranny of Roman tradition set a false standard. The strengthening dominance of formulas has been evidence of increasing self-consciousness which could not free itself from formula, until formula, hiding what little remained of vital impulse, finally crushed it, and set itself upon a pedestal to proclaim formula, not the degradation but the essence of art.

There can be no question, when we face the situation, as to whether growth, if growth be possible, is greater than any copy, however splendid the model. Growth is always possible. The arrangement of the facts of life is always changing and so the truthful expression of the significant facts must change. The facts are modified to meet the demands that we call progress and may admit to be advance; hence the expression would be advance, would be growth. All solid progress has been gradual, has been built on tradition, on experience. No sudden departures have proved worthy in any branch of culture. The renunciation of the demands of formula in art does not mean the contradiction of tradition and experience. Architecture could not grow by discarding formula and plunging into chaos. The artistic impulse of the individual may be sincere enough and true enough to help the future, may be vital enough to gather again into the impulse of a group or nation, but such an impulse will be ordered, sane; must in our day be imbued with the scientific spirit. The innovations of personalities who pose as genius and flout experience cannot bring growth and yet cannot even endanger it because there is no short cut to truth.

Almost every single form that has gradually attained a place in the vocabulary of architecture is worthy in itself and appears so in its proper use. We can hardly imagine a demand of use that has not already developed its proper form or forms. They have grown through very long adjustments and it seems impossible to manufacture, offhand, new forms that can compare with the ones the past has given us. The danger from the example of the past lies in the fact that it grouped these forms to express, very greatly, differing but fundamental ideals. We no longer desire to express those ideals for we do not feel them, but we cling to the beauty of the combinations and so mask the poverty of what we say by hollow copies of things that were evoked to say something else. The old forms grew into new ones which in turn have become old by adjustment to requirements. We need no more forms to renew progress, but if we fit the ones we have to the needs we have, new forms will develop as surely as they did in the past. The destruction of formula does not mean the relinquishment of a single worthy form that is now in use, but it does mean that the old forms shall not be so combined that they recall any given period, any characteristic of the past. We must wipe out of our own work the indirect expression of any other age or nation. We have no right to that and should feel shame that it might be possible for us to go down in history as lacking an expression of our own. If we have no vital spiritual thing to say, we can at least be truthful about the material things that we demand, and it will not be surprising if, in the end, the truth shows forth as very deeply spiritual. The salvation of the art in architecture seems logically to depend upon the honesty of science.

All this is rank iconoclasm but it is common sense. Our ancestors seem to have developed all the forms that architecture needs for adequate expression. They took from this language of forms what they needed for their materials and their constructive methods and created groups of forms that expressed the ideals which moved their lives. We use their groupings and express nothing. It is really this more than that we have nothing to express. As individuals we can have much to say that is worth while, even if conditions prevent us at the moment from thinking in the general mass. If we break down the groups of forms, resolve our language into words again and forget the outworn idioms, we can begin to speak more clearly. There is nothing to prevent us from combining any form with any other, no matter what its historical development, so long as every form we use is structurally expressive, is harmonious in shape with every other and so long as the groups we form are regulated by the demands of order, of proportion, of balance and rhythm which is symmetry, or of picturesqueness which is comfort.

The fundamental laws of art hold good irrespective of the identity of form. The structure and materials that we have at hand are altogether worthy if we use them truly and do not let them usurp the place of other structure and materials. We must do away with all sham, with all pretense. If we sweep aside the preconceptions that blind our vision, the horizon is suddenly very wide. We have all the experience of the past, all the possibilities of color and texture and form, all the possibilities of structure and of art. We must go back to the fundamental units of our vocabulary. Very seldom will they contradict each other. Every language has adopted words from almost every other and has gained greatly by the adoption. We must build with our spaces and shapes and colors as the musician builds with notes. We have the freedom, almost, of his expression, if we will accept it. There is no possibility of death in architecture if we permit it to take its natural course. The standard is a very simple one. Above all, it must be structure—we but reiterate in this—and the structure must be ruled by art, by a self-conscious art, since we are for the moment so restricted, but an art that may none the less be fundamental, be truly expressive of ourselves as we are conscious of ourselves; an art that has brought itself in tune with the advancing imagination of science and whose demand is truth. Architecture must be made to express its physical truths as clearly, as economically, as beautifully as the mind of man can understand those truths. If we accomplish this there need be little fear that the deeper beauty will not come.

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